

DUN'S REVIEW

MARCH · 1953

35¢



How To Grow a PRESIDENT



R. J. MAKARIUS

President, Acme Plumbing Supply Company

SO YOU are a president—or you want to be one!

It has been my experience that the great majority of articles in business magazines give their space to the operation and management of large enterprise. Here are some suggestions for the management of small enterprise.

I am not against big business, I believe in it. I would like to be a leader of it myself, but some of us must face the situation that the small, or medium sized operation, employing 100 or less employees, performing such key services for big business as the servicing, warehousing, distributing, selling, and subcontracting of its products, will never reach the billion dollar class.

The president of a small corporation carries a responsibility on his shoulders far exceeding that of many individuals whose titles and big name firms are far more glamorous. In the first place, he will in all probability have a family group to deal with and they will rest on him all blame for whatever good or bad may hit the firm.

Continued on page 25



Ordinary, steel filing cabinets and obsolete safes cannot protect records from fire damage.

Could you stay in business with records like these?

The records on which the very life of your business depends should be safeguarded against destruction by fire.

Don't rely on your "fireproof" building for protection. It won't burn but its combustible contents will — furnishings, floor coverings and *records*.

And don't rely on your standard steel filing cabinets either. Their thin walls only transmit heat, scorching papers within beyond recognition in as little time as five minutes.

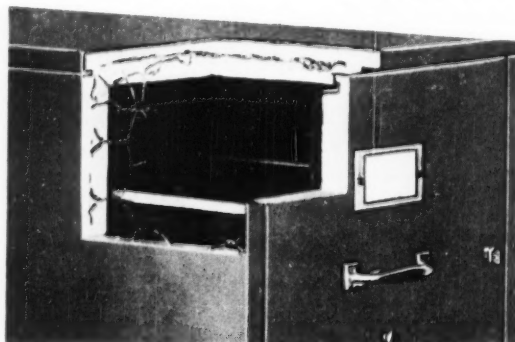
You're insured? Read your policy. Insurance doesn't cover loss of business records. In fact you *need* accurate records to establish your proof of loss status.

CERTIFIED FIRE PROTECTION FOR EVERY VITAL RECORD

Act now — before fire strikes — to protect your ledgers, correspondence, inventory records, tax records and other "recorded assets" in Remington Rand Insulated Safe-Cabinet equipment. Full range of Safe-Files and other convenient, economical, "point-of-use" units to choose from... some 200 models, the world's largest selection, certified for 1 to 4 hour fire protection, according to your fire hazards.

Free 8-page booklet, No. SC-684, describes this "point-of-use" equipment in detail. Get your copy today from

the nearest Remington Rand Business Equipment Center. Or, write to Room 1757, Management Controls Reference Library, 315 Fourth Ave., New York 10, N. Y.



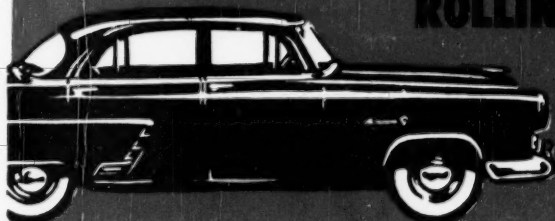
Remington Rand Safe-File with top corner cut away, revealing built-in, steel-reinforced, monolithic insulation. This, and interlocking tongue and groove construction of drawer openings, make each drawer a separate, fire-protected compartment.

**CERTIFIED FIRE PROTECTION AT POINT-OF-USE!
OVER 200 MODELS TO CHOOSE FROM**

Remington Rand
INC.

Here's How You Can Save Over \$1,000 Per Car, Per Year!

WITH ROLLINS FLEET LEASING SERVICE



Rollins Fleet Leasing was formed to offer tremendous savings to companies now operating under company-owned or salesman-owned plans.

Our company provides all automobiles and trucks on an extremely economical rental, which benefits clients in many ways.

When you lease your cars and trucks from us these advantages are yours:

- NO CAPITAL INVESTED
- 100% TAX DEDUCTIBLE
- NEW CARS YEARLY
- UNLIMITED MILEAGE
- BETTER EMPLOYEE RELATIONS
- YOU SAVE THOUSANDS OF DOLLARS

Make your own comparisons after checking over this actual record of 45 company-owned cars.

COMPARISON SHEET

Based On Forty-five Salesman-Owned Cars

Salesman-Owned Plan
1 automobile
30,000 average annual mileage
\$2,400 per year (8¢ per mile)

Rollins Fleet Leasing Plan
1 new automobile
—30,000 average annual mileage
\$822 rental per year (\$68.50 per mo.)

**(\$600 gas and oil allowance at 2¢ per mile; it has been found that on a rental lease plan salesmen average 25% less mileage, consequently.)
\$450 annual gas and oil allowance

\$2,400 per car per year—
\$108,000 annually

\$1,272 per car per year—
\$57,240 annually

Total Saving \$50,760 Annually on 45 Cars!

YEARLY LEASE: FORDS, CHEVROLETS OR PLYMOUTHS

100 or more units only \$49.92 per month
This Special Rollins Plan Is Based on the Federal Depreciation Scale.
You pay rental at same rate car or truck depreciates.

25 or more units	\$68.50 per month
14-24 units	70.00 per month
6-13 units	73.00 per month
1-5 units	75.00 per month

Yearly rates as low as \$1.77 per day for cars on non-maintenance basis. Special arrangements on executives' cars. Savings on Leased Trucks are equally great. For all the facts and figures, write for complete information to:

Compare these rentals to your present operating costs.

"Troubles Cease When You Lease"

ROLLINS FLEET LEASING

Rehoboth, Delaware

Rollins Fleet Leasing, Dept. D.R.-3
Rehoboth, Del.

Gentlemen:

I would like to know more about your fleet leasing service. Please send me further details and your free transportation survey. We operate: (please signify number)

_____ cars _____ make _____ year
_____ trucks _____ light _____ medium _____ heavy

Please print (Name) _____

(Company) _____

(Address) _____



Chessietown men are handy with tools

Sam is like a lot of other men in Chessietown—he prides himself on being able to do most things well. When his wife wanted a picture window, Sam put it in. When his boys wanted a boat, he helped them build it. And his car, which looks and runs like new, has seldom seen the inside of a garage in its ten hard-working years.

Men like Sam are good workmen. They are resourceful; learn new skills quickly; take a lot of pride in doing a job well. Many of the virtues of their pioneering ancestors are still strong in these Chessie people. Independence is one. Thrift is another. Most of these folks own their own homes. Many live on small farms. A lot develop hobbies into part-time business.

You'll have real respect for the Chessietown people when you get to know them; you'll like having them working for you.

And the people are only one of the good reasons so many new industries are locating in our part of the country. It's nice to have your raw materials right in the back yard and most of the nation's markets only a day or two distant by C & O fast freight. Let our industrial experts make up a pin-point survey showing how perfectly a location on the C & O would fit the needs of your business.

Write to Chesapeake and Ohio Railway, Industrial Development Department, Terminal Tower, Cleveland 1, Ohio. All information is accurate, confidential and adequately supported with photos, maps, aerial surveys and vital statistics.

SERVING: VIRGINIA • WEST VIRGINIA • KENTUCKY
OHIO • INDIANA • MICHIGAN • SOUTHERN ONTARIO





Who helps steel follow through?

How banks help steel companies supply the nation's needs

GIVEN A MOUNTAIN of iron ore, a roaring steel mill, a thousand skilled workers and a corps of production experts . . . you might be able to make steel for a number six iron.

You might. But—

Steelmaking takes money . . . lots of money!

That's why many steel men turn to banks for short-term loans that help—mine the iron ore, transport it to processing centers, convert it into steel, and market it to manufacturers of consumer and industrial goods.

In addition, bank loans help steel companies pay for such things as plant expansion, equipment modernization . . . metallurgical research.

To you . . . this means steel products where, when and how you want them. It means that you can drive a durable automobile, work safely in the world's tallest skyscrapers or . . . buy a pound of screws at the corner hardware store for just a few cents.

All in all, these steel industry loans come to many millions of dollars each year. And they're made for this basic reason:

In a free enterprise system it's competitive banking's job to put money to work wherever and whenever it will best help the American economy.

But, there's more to it than that. When money works, men and women work, too . . . the community's wealth increases, and people live more prosperously . . . more securely.

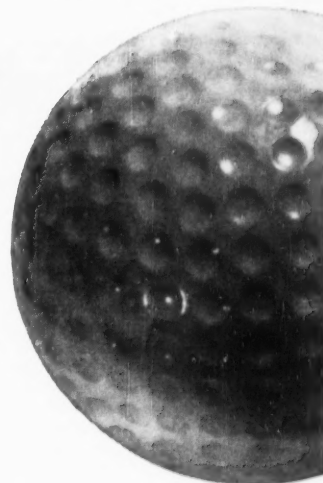
Few industries illustrate this better than steel, and we believe that America's banks make a real contribution to the whole nation's progress when they, "help steel follow through."

Chase National bank is proud of the part it is playing in American progress.

**THE
CHASE
NATIONAL BANK
OF THE CITY OF NEW YORK**

(MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION)

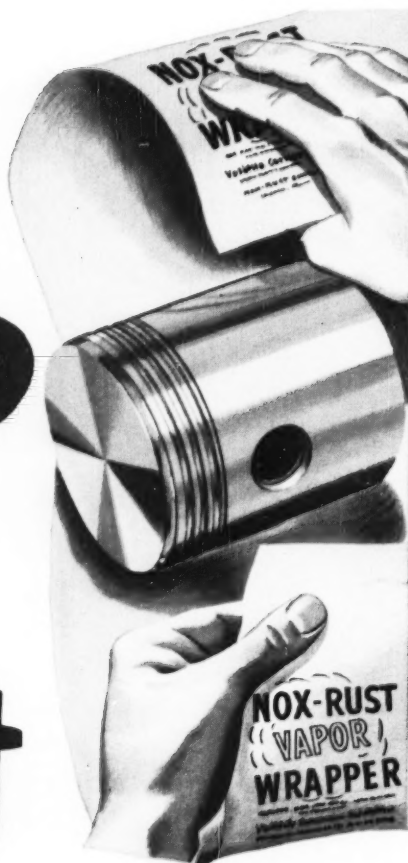
(One of a series of advertisements being published in New York City newspapers)





One company **SAVED 75%** on
the cost of packaging pistons!

Wrap Out Rust



with **NOX-RUST Vapor-Wrapper**,
the new chemically active paper that blocks rust
in one simple operation!

Rust-proofing with amazing new Vapor-Wrapper is as simple as wrapping a package! Just wrap metal parts in Vapor-Wrapper. That's all there is to it! A new NOX-RUST Chemical within the paper makes moisture laden air non-corrosive . . . without the need for an air-tight package . . . without deposits forming on the metal.

Use Vapor-Wrapper to protect all metal products—from cotter pins to printing presses. Vapor-Wrapper reduces packaging costs, ends dipping with liquid rust preventives, eliminates cleaning and degreasing.

The chemical in Vapor-Wrapper is an exclusive, new development of NOX-RUST laboratories, and is covered by U. S. Patents. It is also available in crystal form for blowing into otherwise inaccessible areas.

Pistons now rust-proofed for 5¢ instead of 20¢! That's the saving made by one leading company* since changing to economical Vapor-Wrapper. And like many others, this company delivers its products "factory fresh" . . . ready for immediate use.

*Name on request.

Rust Prevention Specialists Since 1935, NOX-RUST makes scores of rust preventives for all jobs, including those which must meet government and Armed Forces specifications. Leading companies rely on NOX-RUST in their continuous fight against rust.

Vapor-Wrapper conforms to Military Specification MIL-P-3420, Packaging Materials, Volatile Corrosion Inhibitor Treated.

Write for full details on Vapor-Wrapper today!

**NOX-RUST
(VAPOR)
WRAPPER**

NOX-RUST

Chemical Corporation

2433 S. Halsted Street
Chicago 8, Illinois

Offices in Principal Cities

NOX-RUST Chemical Corporation
2433 S. Halsted, Chicago 8, Illinois

Please send me your booklet on Vapor-Wrapper, the rust-preventive paper that wraps out rust.

Name _____ Title _____

Firm Name _____

Address _____

City _____ Zone _____ State _____

MAIL NOW

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Bayonne Bridge, by Monkmeier. Cover: Chi-
cago, by Devaney.

We want to do a job for you. Give us your confidence

LET OUR PLANT LOCATION SPECIALISTS HELP YOU FIND THE IDEAL SITE FOR YOUR NEW FACTORY

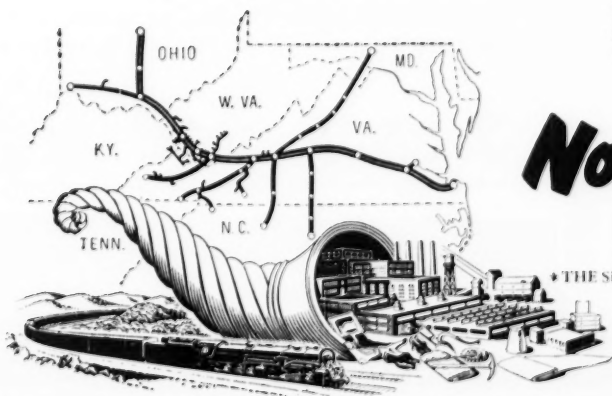
We have a staff of men with high ratings as plant location specialists. They have many years of experience, in a department of the Norfolk and Western Railway which for more than 50 years has helped manufacturers find plant sites suited to their particular needs.

We operate in a growing territory that offers many of the "absolute must" advantages, plus many "extra" advantages, and our plant location specialists *know* this territory served by the N. & W. *They understand the problems of manufacture as related to*

location, and they know the importance of operating quietly . . . to serve you best.

It's easy to tell you about the general industrial advantages of *The Land of Plenty** — but to show you exactly what there is here for you, our plant location specialists need specific information on your requirements. And they will give you the specific information you need. Get in touch with them — write, wire or call The Industrial and Agricultural Dept., Drawer DR-601, or Telephone 4-1451 — Extension 474, Norfolk and Western Railway, Roanoke, Virginia.

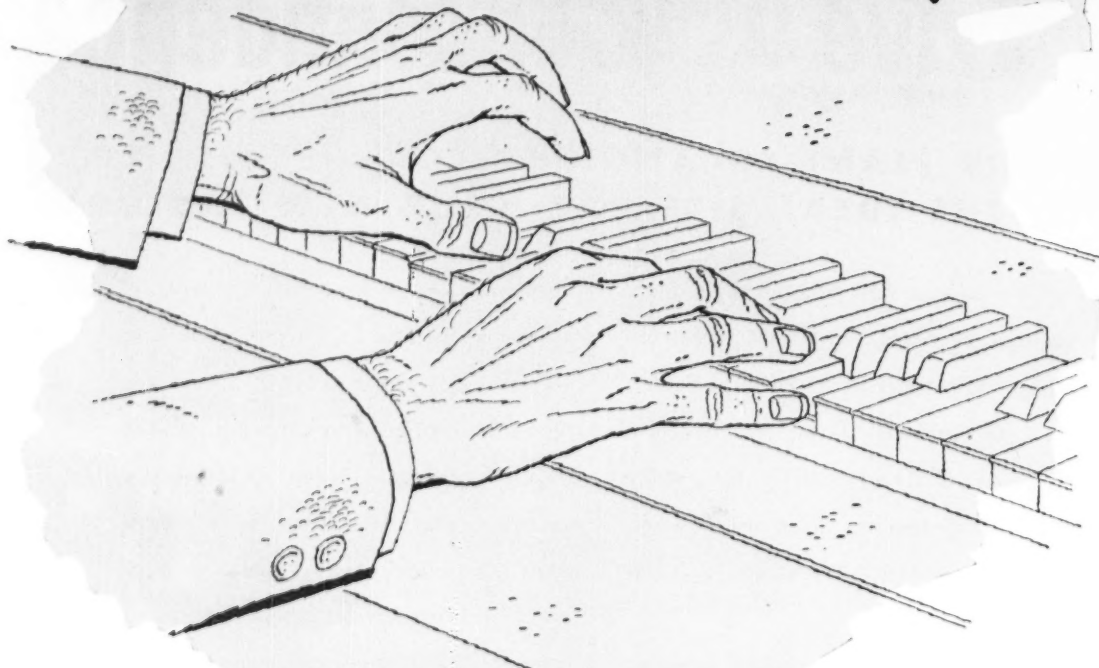
Manpower, Raw Materials, Power and Water, Precision Transportation, Bituminous Coal, Taxes, Nearness to National Markets, Port Facilities For World Markets, Good Communities, Fair Real Estate Values and Plenty of Room to Grow — *all are favorable to industry in THE LAND OF PLENTY.*



Norfolk and Western RAILWAY

*THE SIX GREAT STATES SERVED BY THE NORFOLK AND WESTERN—
VIRGINIA • WEST VIRGINIA • OHIO
NORTH CAROLINA • MARYLAND • KENTUCKY

Hands are wonderful, but...



- Hands are wonderful, intricate mechanisms. They provide great strength for the workman and the athlete . . . life-saving sensitivity and skill for the scientist and the surgeon . . . nimble precision for the musician and the artist . . . and commonplace but vital performances for everyone.

But . . . hands are the world's most inefficient mechanism for handling bulk materials!

Among the modern, automatic methods developed for transporting and handling bulk materials, Dracco Airstream Conveyors rate as one of the best. If you move large quantities of bulk materials investigate the many cost-saving advantages produced by "Performance Proved" Dracco Airstream conveying systems. The full story of the economies and advantages of the Dracco Airstream technique is presented in Dracco Bulletin 529 which will be sent to you on request.

DRACCO CORPORATION, 4044 East 116th Street, Cleveland 5, Ohio.



DRACCO *Performance Proved*
Airstream CONVEYORS • DUST CONTROL EQUIPMENT



Heard in WASHINGTON

President Eisenhower has come to grips with current issues in a spirit of humility, but without timid vacillation. He is demonstrating that he has political deftness and independent vision. He is showing himself capable of making the honeymoon work for the good of the people.

Few presidents have had the support of a more able team. The success of any President depends greatly upon the quality of advice he receives from his associates and upon their ability to work with Congress.

New officials have taken over key posts in Government with great eagerness. Whether they will be able to steer the country safely through the incredibly difficult years to come remains to be seen, but there is assurance that strenuous efforts to that end will be made by able and honest men.

* * * * *

Treasury financing is carrying out the anti-inflationary prescription. Securities are being refunded into longer maturities which pay interest rates that attract money from non-bank investors. The Treasury is not depending on the Federal Reserve to condition the market for its offerings.

Expansion of industry fluctuates more than does consumption. It, therefore, is more important in determining the ups and downs of business activity. Commerce Secretary Sinclair Weeks thinks the need is for an economic climate that encourages an even flow of investment. That requires stable values, equitable taxation, and flexibility of investment. He thinks there is every reason to be optimistic about the outlook, but he warns that everyone should be alert to the difficulties that must be overcome and to the removal of conditions that cause these difficulties.

According to Commerce Secretary Sinclair Weeks, the administration "has unquenchable confidence in the long-haul power of free enterprise . . . knows that free enterprise will be enterprising . . . will provide accurate information on sales prospects and trade opportunities . . . will help members of society to help themselves in the pursuit of happiness and encourage business to stand on its own feet."

Although defense spending is less than one-fifth of all spending, it has an influence on the economy out of proportion to its volume. For that reason it is being watched more closely now, in the year the armament program is expected to reach its peak. So much has been said about the dire consequences likely to follow a downturn in business that it gives rise to pessimistic predictions. It is an objective of both Congress and of the administration to reduce defense outlays, but moves being made in the international situation may make increases necessary instead.

Even if elimination of waste and favorable developments abroad should make possible reductions in military spending it is felt that there should be enough imagination and ability on tap in the business community to take up the slack. Sumner Slichter suggests the building of toll roads to replace defense outflow. Since losses due to traffic congestion greatly exceed the cost of adequate streets and highways this proposal has wide appeal. The tax structure can be improved so as to provide more encouragement for enterprise. Great opportunities are offered for increasing productivity.

* * * * *

Anxious attention is being levelled at installment credit, both on Capitol Hill and in the executive departments. It is recognized as the link in the economic chain most likely to give way in case strain develops.

Even those who favor reimposition of direct controls over installment credit have no stomach for an unpopular job, which is difficult to administer because it involves so many small transactions. Others object on the ground that business should be as free as possible from Government interference. That is in line with general administration practise, but some in the Government feel that a deviation from policy is justified in this case. Deviationism is a capital offense only in communistic countries, they say.

Paul Weston

WASHINGTON, D. C.

FEBRUARY 1953



Mister Businessman...

Give yourself this test!

COMPARE your techniques of materials handling with those leading firms in your own field.

CHECK the chart at right, indicating operations of interest to you. Mail the chart to Rapistan and receive actual Field Reports telling just how other companies are solving those problems most profitably. See how your own methods rate by comparison.

HERE'S WHY YOU MAY BE SURPRISED

Rapistan Field Reports feature the very latest solutions to actual handling problems... solutions *tried, tested, and proved highly successful* by leading firms in every industry. In fast-reading capsule form, these reports discuss the problems as they existed; show photos, diagrams, specifications and cost of equipment installed; tell exactly what results were achieved. You may be *very* surprised to learn how much more efficient your present equipment can be, or how a single additional conveying unit can lick an entire problem for you.

If you would like further information, ask for the Rapistan catalog of power and gravity conveyors. Units, lines, or engineered systems for every operation in chart at right. Reputation of Rapistan equipment is built on flexibility, quality and value... your assurance of continuous dependable, cost-cutting performance wherever you put it to work.

If you need expert help for a specific handling problem, consult Rapistan engineers. Let them survey your operation. Their advice, like Rapistan Field Reports and catalogs, is yours for the asking... no obligation.

Rapistan®
BETTER CONVEYING EQUIPMENT

Representatives in Principal Cities

CONVEYORS • INDUSTRIAL CASTERS • WHEEL-EZY® TRUCKS

AND GET THESE!

Explicit details on most successful techniques employed by other firms in your field for the following operations:

- ☐ Controlled movement through any operation
- ☐ Conveying between machines
- ☐ Inspecting operations
- ☐ Loading, filling or sealing of containers
- ☐ Loading or unloading; truck, ship or boxcar
- ☐ Long distance package movement; inter- or intra-plant
- ☐ Movement between floors
- ☐ Movement into storage bays
- ☐ Order selecting
- ☐ Receiving operations; box, carton or bag
- ☐ Sorting operations
- ☐ Shipping operations
- ☐ Stacking; cartons, boxes or bags
- ☐ Stock transferring
- ☐ Storage; balcony or bin

NOTE: If you have a problem not listed here, please describe it. There are many other Rapistan Field Reports to help you.

Please check your business classification:

☐ Manufacturing ☐ Agricultural ☐ Wholesale ☐ Retail

The RAPIDS-STANDARD COMPANY, Inc.
136 Rapistan Building, Grand Rapids 2, Mich.

NAME _____

COMPANY NAME _____

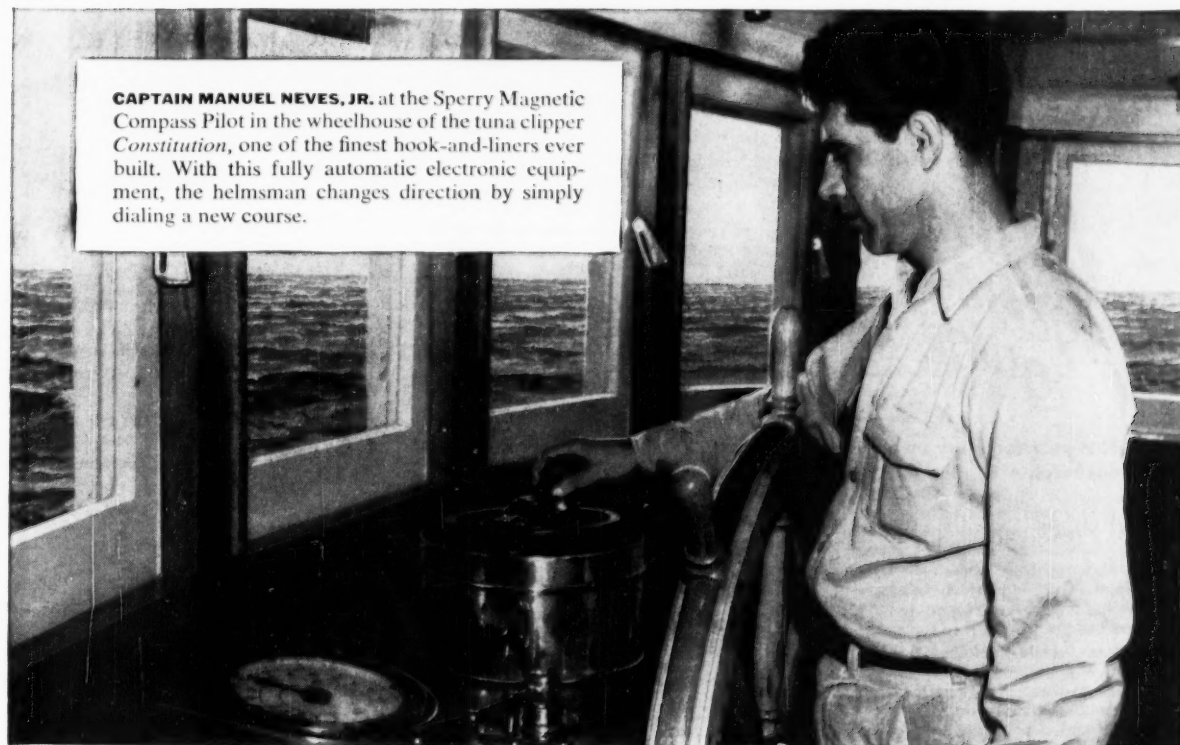
STREET ADDRESS _____

CITY _____ ZONE _____ STATE _____



Article Number One of the CONSTITUTION

AMERICA'S GREAT 1952 CLIPPER



CAPTAIN MANUEL NEVES, JR. at the Sperry Magnetic Compass Pilot in the wheelhouse of the tuna clipper *Constitution*, one of the finest hook-and-liners ever built. With this fully automatic electronic equipment, the helmsman changes direction by simply dialing a new course.



JOE S. ROGERS

"Of all the navigational aids to profitable fishing incorporated in the *Constitution*, none is more important to us than the Sperry Magnetic Compass Pilot. I'm recommending it to all my friends," says Mr. Joe S. Rogers, builder and managing owner of the *Constitution*, one of the truly great vessels in tuna clipper history.

Today owners of all types of fishing craft—both new and modernized vessels—are specifying the Sperry Magnetic Compass Pilot for economy and profit. Sperry automatic steering gets a vessel to the fishing grounds and back with a minimum

expenditure of time, fuel, and manpower—because it follows a *prescribed course under all sea conditions*.

At the fishing grounds the Sperry Magnetic Compass Pilot is equally valuable. Heading changes are swiftly and easily made, and held automatically. A portable remote controller provides full rudder control outside the wheelhouse. More men are released for fishing while the catch is

on, and the skipper can give his personal attention to important fishing operations. This results in bigger hauls and greater profits in a shorter time.

Backed by Sperry's extensive and dependable service, the Magnetic Compass Pilot can be supplied with either an electric steering engine or a hydraulic ram. Our nearest district office will be glad to give you detailed information.

SPERRY GYROSCOPE COMPANY

DIVISION OF THE SPERRY CORPORATION

GREAT NECK, NEW YORK • CLEVELAND • NEW ORLEANS • BROOKLYN • LOS ANGELES • SAN FRANCISCO • SEATTLE
IN CANADA—SPERRY GYROSCOPE COMPANY OF CANADA LIMITED, MONTREAL, QUEBEC

FREE ^{COPY TO} EXECUTIVES



EAGLE-A's new, unique

Letter placement guide

...helps your secretary improve
the appearance of your letters!

New aid for your business correspondence! Slips into typewriter under letterheads...helps your secretary set correct margins and center every letter perfectly. Cuts down retyping...saves time and paper. Write for yours today—use coupon below.

Also free: Sample Kit of Eagle-A Papers for all your business and office needs. Eagle-A Papers are nationally famous for their fine appearance, uniform quality and dependable printability.



CLIP THIS COUPON TO YOUR LETTERHEAD
American Writing Paper Corporation
Holyoke, Mass., Dept. D-1
Send your FREE Letter Placement Guide
and Sample Kit of Eagle-A Papers.

NAME.....

TITLE.....

Letters

TO THE EDITOR

ABOARD THE CHESSIE

Arlington, Va.

Dear Sir:

On Thanksgiving, I had a train trip on the "Chessie" where I picked up—or rather a nice gentleman handed to me your November 1952 number of your periodical, DUN'S REVIEW, which I enjoyed reading very much.

I enjoyed reading the article about truck transportation very much because I formerly worked for a transportation company. I now work for the Children's Bureau, Federal Security Agency.

I brought it to the office to read it and my supervisor admired the colored picture of the white birch trees in a New England Village so very much that she begged me for it. My supervisor did not let me read any—but loaded me with work—so had to take it home to finish the article. I tore out the colored picture and gave it to her and now I want one myself in order that I can frame it and hang it in my breakfast room.

I am enclosing \$1.00 in cash for which please include the December 1952 number making \$.70 and please send the remainder (30 cents) to me in stamps. The reason I am asking for the December 1952 number is that there possibly might be a beautiful picture in it, too.

Julia M. Crouch

Fearing Miss Crouch might scorn the December pictorials, we sent them free.
—Ed.

STIMULATING STUFF

Frankenmuth Brewing Co.
Frankenmuth, Minn.

Dear Sir:

I would appreciate receiving from you a copy of your August DUN'S REVIEW. I have several pages of your August REVIEW and it has stimulated so much interest that I would like to have the entire publication for August. . . .

Wallace E. Riethmeyer

NOVEMBER NOTES

Marsh and Truman Lumber Co.
Chicago, Ill.

Dear Sir:

Will you be good enough to send a copy of DUN'S REVIEW for November to Collins Construction Company, 3160 Fairfax Road, Kansas City 15, Kansas.

In this connection, I do want to congratulate your Editorial Staff on the very,

4 PROJECTORS in ONE

All the features you have desired are
combined in the

TSI 16mm

"SUITCASE" PROJECTOR

Over ten years of experience and thousands of TSI "Suitcase" machines in service today prove the exceptional advantages of this projector in industry and sales.

NOTE THESE EXCLUSIVE FEATURES!

Self-Contained Magazine Projection

No reels of film to thread—no screen to set up—no sound speaker to engage. Self-contained screen measures 135 sq. inches. Continuous magazine holds 800 feet (22 min.) black and white or color film, sound or silent.



Standard Magazine Projection

Standard projection on any conventional screen to auditorium size. Continuous magazine is power driven giving automatic rewind. Film run through once is automatically ready to go again after every show.



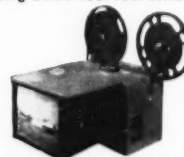
Standard Reel Arm Projection

Using 2000-foot (55 min.) reel arms, furnished with each machine, long feature length films can be projected as easily as with standard magazine projection.



Self-Contained Reel Arm Projection

Using 2000-foot reel arms and self-contained 135-inch screen up to 55 minutes of sound film may be shown. Crystal clear pictures are projected even in daylight!



Bell & Howell or DeVry Models

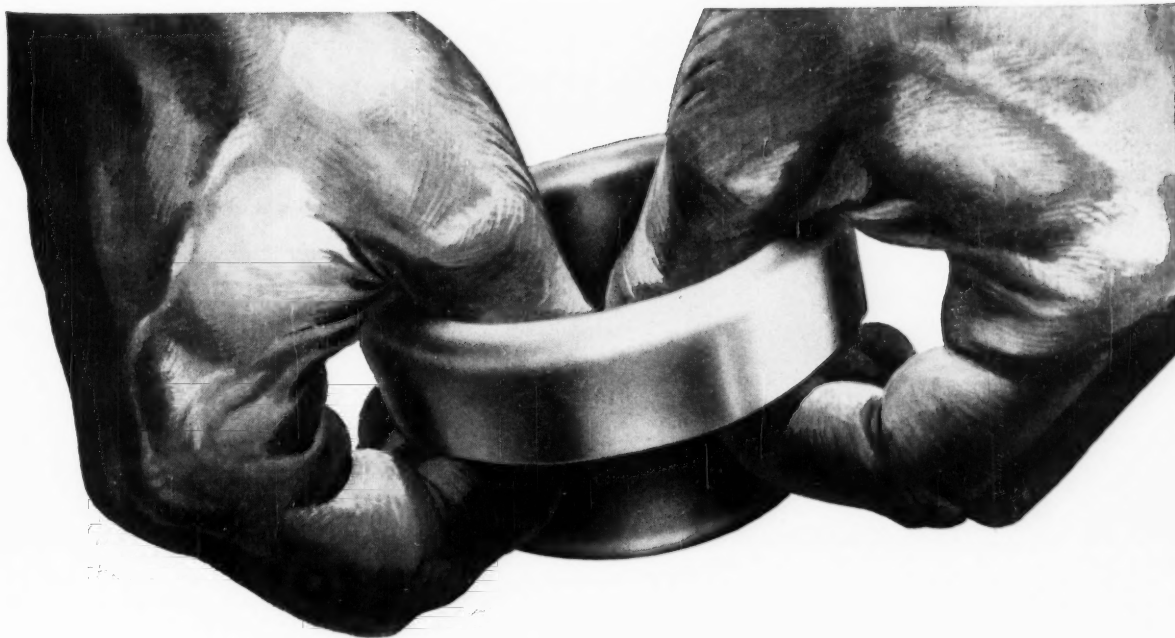
TSI "Suitcase" Projectors are furnished with Bell & Howell or DeVry projection and sound systems. Easy to carry custom case size measures 14" x 22" x 12"—approximately 40 pounds.

Write today for illustrated brochures featuring
TSI "Suitcase" Projectors.

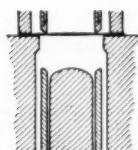


TECHNICAL SERVICE, INCORPORATED
Dept. D-2 30865 Five Mile Rd.
Plymouth, Michigan, U.S.A.

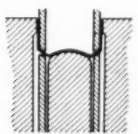
Custom Mfgs. of Electronic and/or Mechanical Equipment



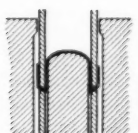
How to turn a high strength steel cup inside out, cold



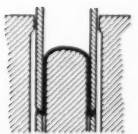
1



2



3



4

OFFHAND, anyone familiar with high strength steels would say it couldn't be done. But one of our customers does it every day.

Employing a unique reverse-drawing method and using a U-S-S High Strength Steel especially adapted for this process, they turn out cylindrical containers of various kinds that are not only stronger than those made from carbon steel but weigh substantially less.

To accomplish this, the steel has to meet two entirely opposite requirements. It has to be so strong that it can be used in thinner gages to reduce weight, and yet must have enough ductility to satisfy the drastic fabrication method that would be considered severe even for carbon steel.

This method is used to draw cups for large, low-pressure cylinders. These cups, 14½ in. in diameter and 24½ in. deep, are drawn cold, from 12-gage steel blanks in one continuous stroke in a reverse draw press. The diagrams at left show how it is done.



Starting with a 38 in. diameter steel blank (Fig. 1) the press first draws the steel into a shallow cup (Fig. 2). As the stroke continues, the cup is literally *turned inside out* (Fig. 3) to form the finished cup (Fig. 4) which has very uniform wall thickness. Two of these cups are then welded together to make a cylinder.

Made with high strength steel, cylinders weigh about 20 lbs. less. The maker gets 26% more cylinders from each ton of steel used. Lighter weight makes cylinders easier to handle, and also pays off in lower freight costs—both on the steel from our mills and on cylinders shipped. (A customer 500 miles away saves as much as \$100 per carload.)

Developing special steels for special customer needs is an important job of United States Steel metallurgists and engineers. With their tremendous background of practical experience, they are ready to work on any problem that involves the more efficient use of steel. United States Steel Corporation, 525 William Penn Place, Pittsburgh 30, Pa.

UNITED STATES STEEL

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Send for your **CRESTLINE Office-Plan-Rule** today. Experiment with it yourself. You will be pleased to find how you may be able to improve your office layout, add personnel and increase efficiency in the space you now have. Your

offices will look better and your personnel will work better when you use the planned efficiency possible with **CRESTLINE Steel Office Furniture**.



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Please send me the **CRESTLINE Office-Plan-Rule** and the two **CRESTLINE Catalogues** without obligation.

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Firm _____
Address _____
City _____ Zone _____ State _____



very interesting job you are doing. That November issue was remarkably good.

A. Fletcher Marsh
President

Baracalo Manufacturing Co.
Buffalo, N. Y.

Dear Sir:

Would it be possible to get two dozen reprints of Mr. Trundle's article in the November issue entitled "Insulated from Ideas"?

Mr. Trundle expresses some fine thoughts to which I should like to expose members of our organization

G. J. Letchworth Jr.
Treasurer

Royer and Roger, Inc.
Edgewood, Maryland

Dear Sir:

In the November 1952 number of *DUN'S REVIEW* was an article by J. W. Fowler, "A Catalog for Defense."

Contracting (as we are) to perform work in completing the cataloging task, Admiral Fowler's article is of great interest to us. Reprints, if available, to the order of ten copies would be very much appreciated.

Peter W. Sugg
Project Supervisor

SMALL BUSINESS

N. T. Gates Co.
Philadelphia, Pa.

Dear Sir:

I have just finished your paper "Can Small Businesses Get the Capital They Need?" and wish to congratulate you on this careful analysis. Being a new business ourselves in our first year of operation, we can well appreciate your viewpoint on a problem which is more than an academic one to new concerns such as ourselves.

N. T. Gates
President

School of Business and
Public Administration
Cornell University
Ithaca, N. Y.

Dear Sir:

We are developing a course on small business management, hence your special report in the October issue was of special interest.

I would appreciate your sending me a reprint, if available, together with a price list for quantity purchases. . . .

John M. Rathmell
Asst. Prof. of Marketing

Mid States Corp.
Chicago, Ill.

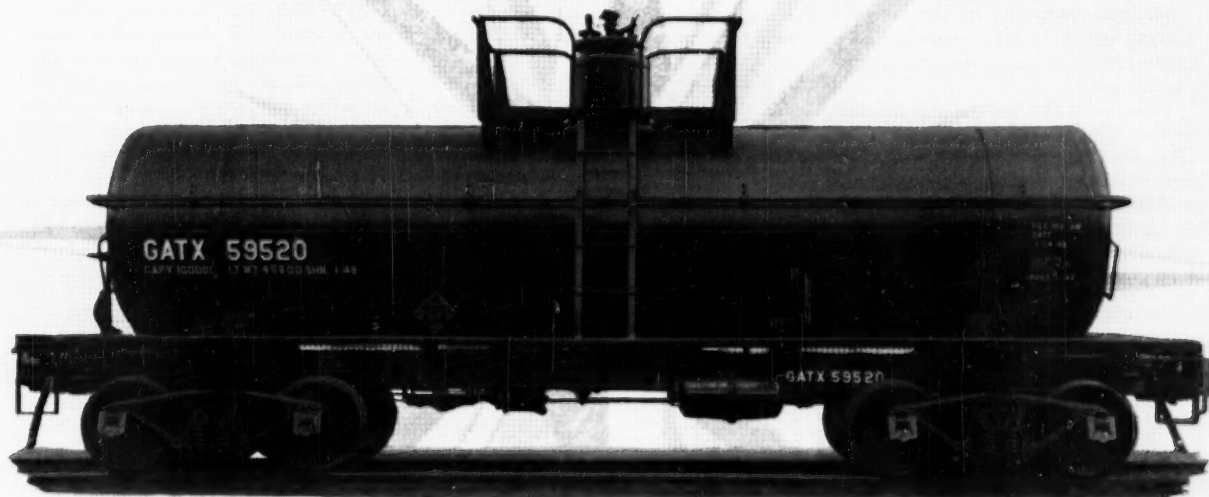
Dear Sir:

We would appreciate receiving an additional copy of the *DUN'S REVIEW* for October.

Continued on page 18

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Please send me your illustrated Booklet X-3 "How to Talk Yourself out of Time-Taking Work."

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BY WEST

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CAN YOU MOP THIS?



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Rubber Tile	44,000
Vinyl Tile	44,000
Ceramic Tile	65,000
Terrazzo & Mosaic	87,500
Marble	150,000

*Based on reports of reliable flooring contractors in urban areas.

How much will it cost you to replace worn-out floors today? The chart gives you some idea.

But, your floors *don't* have to wear out. They can be protected almost indefinitely.

How? With West's simple, proven FLOOR PRESERVATION PLAN. (1) *Cleaning* — remove all dirt without harming floors (2) *Sealing* — fill the pores. Provide a protective coating (3) *Maintaining* — put on a tough, anti-slip floor wax.

The West Plan offers you more than 20 proven products. A West Floor Specialist will be glad to help you select the program or product you need.



42-16 West Street, Long Island City 1, N. Y.

Please send FREE booklet "Proper Care of Floors"

DEPT. I

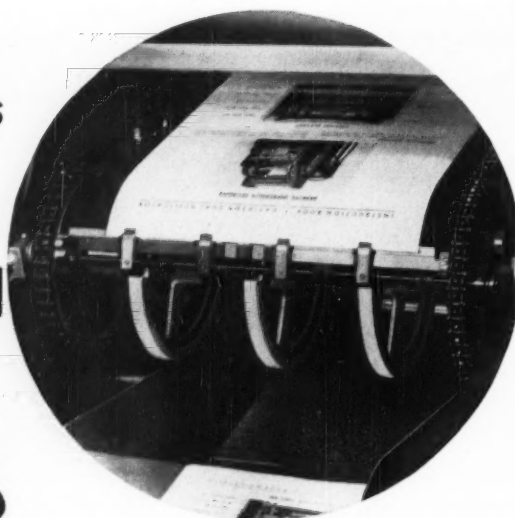
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What
happens
when
you
PUSH
a string



Of course.

And paper is apt to do the same thing when you try to *push* it out of a printing press . . . and the tiniest bend or buckle may cause difficulties. That's why, on a Davidson Dual, the paper is *pulled* out. Four strong steel grippers take a firm hold on the lead edge of the sheet as it enters the press. They never let it go . . . keep it pulled taut . . . straight . . . even . . . all the way until it is printed and out. Only the Davidson provides this positive control.

It's but one of the reasons why a Davidson Dual insures such perfect stripping and stacking . . . one example of the precision engineering that gives you such excellent results . . . with so little attention.

If you do your own printing you know the need for built-in accuracy, dependability and stamina. You know the importance of quick makeready, easy adjustment, accurate register, full ink coverage, simple pressure regulation. You know you must have simple operation, high speed production and low operating costs. You have all this when you own a Davidson.

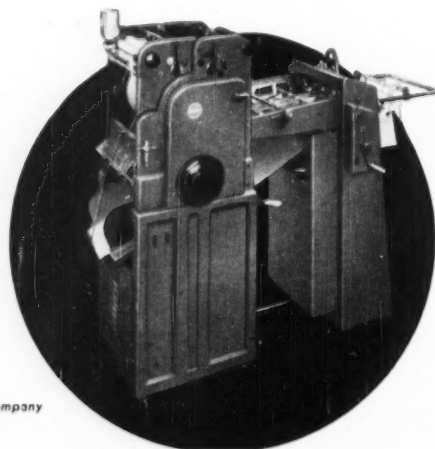
The Davidson Dual is the *only* press that does *both* offset and letterpress. It's the only one that gives you small press economy with big press quality. It gives you printing you can be proud of . . . fine halftone and multi-color work . . . and will maintain that quality and economy year after year. That's why hundreds of users say

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ber 1952 which we understand includes an article on the financing and capital problems of a small business.

D. J. Schreiber
Treasurer

R. H. Macy & Co.
New York, N. Y.

Dear Sir:

Thanks for sending me a copy of DUN's REVIEW for October 1952 containing your excellent article on the capital needs of small business. I read it very carefully yesterday and think you have done a swell job.

As for solutions to this problem, I have grave doubts about the wisdom of federal intervention. I think more can be accomplished on a state basis by cooperation of local interests with less overall danger. Of course, views differ, but the tendency is always to foster some national plan rather than a state plan.

It is an excellent article and I congratulate you.

Q. Forrest Walker
Economist

WILD ABOUT WORDS

John Widdicomb Co.
Grand Rapids, Mich.

Dear Sir:

Mr. A. M. Sullivan's remarkable article entitled "Words—Precision Tools" in the October 1952 issue, has been going the rounds with some of my friends.

I have a letter from my good friend Mr. E. G. Weir, Secretary Manager of the Grand Rapids Furniture Makers Guild asking for a copy of the October issue with this article. I would appreciate very much if it is available, if you would send him a copy . . . I'd appreciate, too, your telling us whether quotations are permitted.

Thank you again for a very remarkable article and for your attention to this request.

E. C. Corwin
Secretary and Treasurer

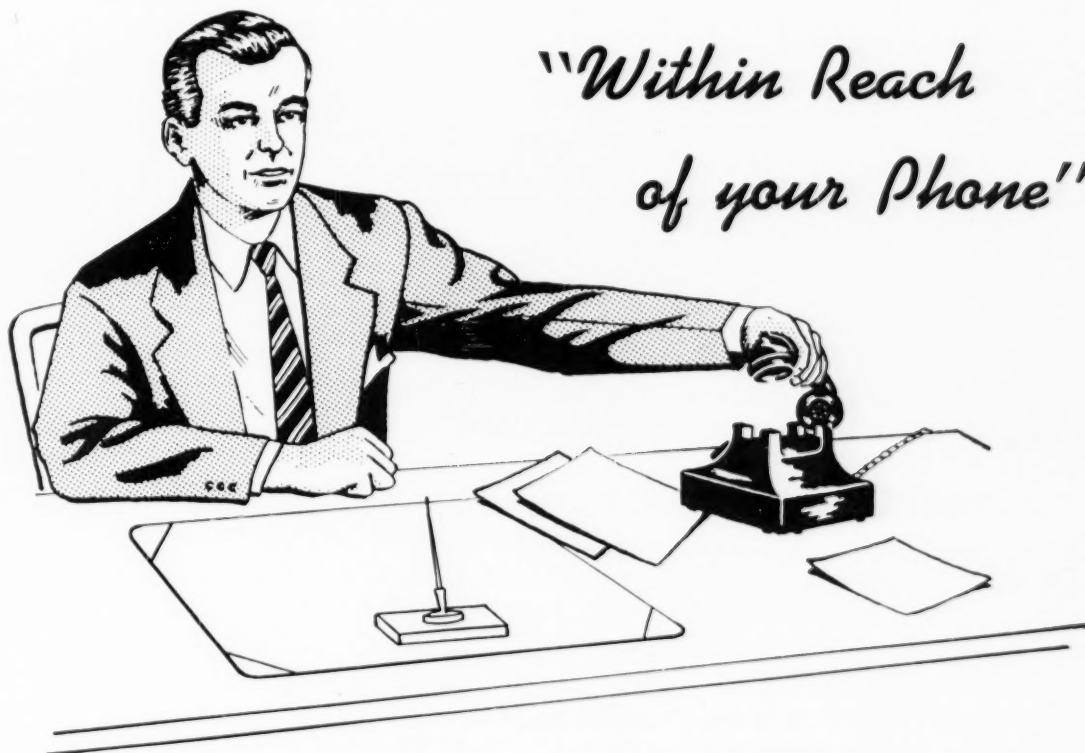
FOR BUSY MEN ONLY

Cambridge Associates, Inc.
Boston, Mass.

Dear Sir:

I am writing to you in the thought that you may be interested, as other publishers have been, in having articles from your publication mentioned in the *Executives' Digest*. *Executives' Digest*, a copy of which is enclosed, is prepared by us for the good will and prestige building use of quite a number of business organizations, including banks and advertising agencies.

It is our purpose to compress articles tightly, bringing to the attention of business men material that might otherwise escape them and encouraging them, as we



When you think of Florida—think of THE FLORIDA NATIONAL GROUP OF BANKS. Call any one of the 23 members of the Group. They are intimately connected in each community they serve and can get you quickly the information that you want.

Many leading banks direct their customers to us for first hand information and efficient banking service. Let us serve you too.

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FLORIDA NATIONAL BANK
& TRUST COMPANY
AT MIAMI

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& TRUST COMPANY
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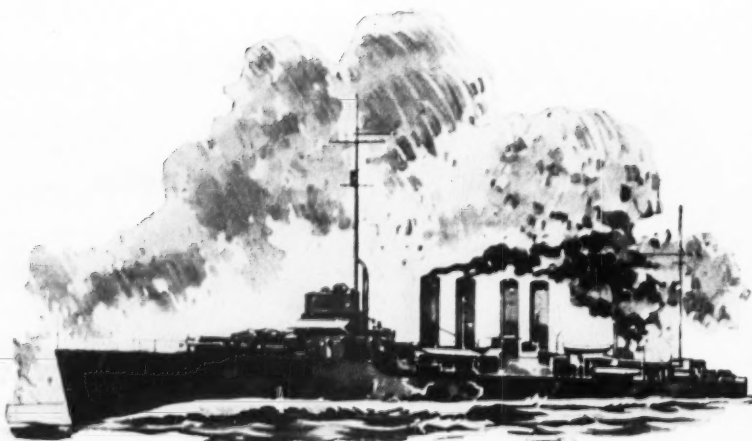


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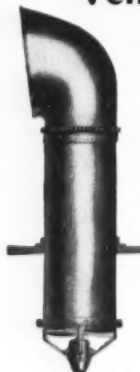


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Ventilating History was made on the destroyer "Kimberly" in 1917



TYPE M VENTILATOR
At End of Cowl Trunk

When the destroyer "Kimberly" (one of World War I's gallant four-stackers) was built at Boston Navy Yard in 1917, an installation of four Wing-Scruplex Ship Ventilators was made in four of her ventilating cowl.

This marked a milestone in ventilating history, proving the value of propeller fans in marine ventilation, and marking also the use of propeller fans—later known as axial flow fans—by the U.S. Navy.

Cowls, dependent upon ship motion or wind velocity to "scoop" air in or lead it out, were of little or no value when a ship was at anchor, or running in a following wind. Powerful Wing (Scruplex) propeller fans, installed directly in the cowl trunks, gave positive ventilation at all times.



TYPE T VENTILATOR
At Top of Cowl Trunk

The special feature of Wing (Scruplex) propeller fans was their ability to deliver air at high velocities and static pressures.

Hundreds of ships, Naval and Commercial, have since been similarly equipped. Today, with the develop-

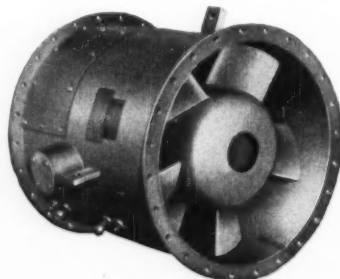
ment of still more powerful propeller fans, as the Wingfoil Axial-Flow Fan, following the same "fan in trunk" idea, the use of extensive air distributing duct systems made it possible to bring positive ventilation to remote parts of the ship.

L. J. Wing Mfg. Co. 315 Vreeland Mills Road **Linden, N. J.**

Factories: Linden, N. J. and Montreal, Canada

Write for detailed information on Wingfoil Axial Flow Fans, Wing-Scruplex Ship Ventilators or any of the Wing products listed below.

Wing
AXIAL FLOW FANS



UNIT HEATERS

FANS

BLOWERS

DRAFT INDUCERS

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know is often the case, to turn to original sources for information of interest to them.

As you'll see by the enclosed copy, many of the leading trade, business and house magazines are glad to have us summarize articles from their pages in *Executives Digest*.

If you care to send us copies of your magazine we shall be glad to review them regularly and summarize such material as seems of special interest to some 45,000 carefully selected business executives in all branches who receive *Executives Digest* every month.

I shall look forward with interest to hearing from you soon.

Richard N. Livingstone

HOT OFF THE PRESS

General Dynamics Corp.
New York, N. Y.

Dear Sir:

Evidently people wait to see the latest copy of *DUN'S REVIEW*. No sooner had your piece on General Dynamics appeared than I received an inquiry from the Sonnenberg public relations agency wanting to know what moves we found necessary in our name change. And I had a second call from another party this morning.

I would appreciate it if you would send me back the raw material which you so expertly boiled down.

R. J. Sullivan

Director of Public Relations

WHEN IN ROME

CIRIOL
Rome, Italy

Dear Sir:

Mr. Earl G. Planty has informed us that you kindly accorded us the reprint (right) in Italian of the article by Earl Planty and Carlos Efferson, the one carried on executive development. The article appeared in the January and February issues of *DUN'S REVIEW*. . . .

Luigi Palma

Secretary General

ROADWORK

Meinrath Brokerage Co.
Kansas City, Mo.

Dear Sir:

I have read with considerable interest the article written by Mr. E. G. Grace, Chairman of the Bethlehem Steel Co., Inc., titled "A New Road Ahead." . . .

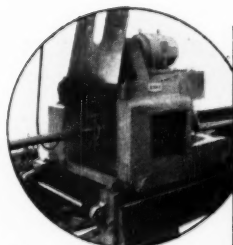
This is the kind of article that I would like to place not only before our executives and sales staff, but our entire personnel. . . .

Irving S. Meinrath
President

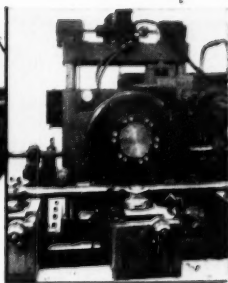


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Above: Cut-Off, Etna 4" mill
Right: Welding section,
Etna 4" mill



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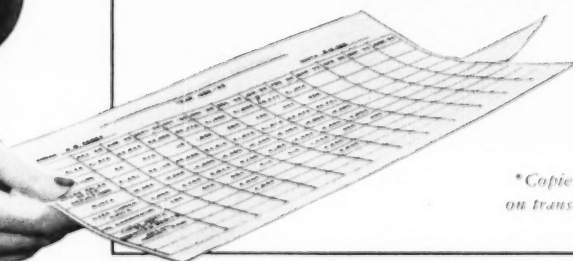
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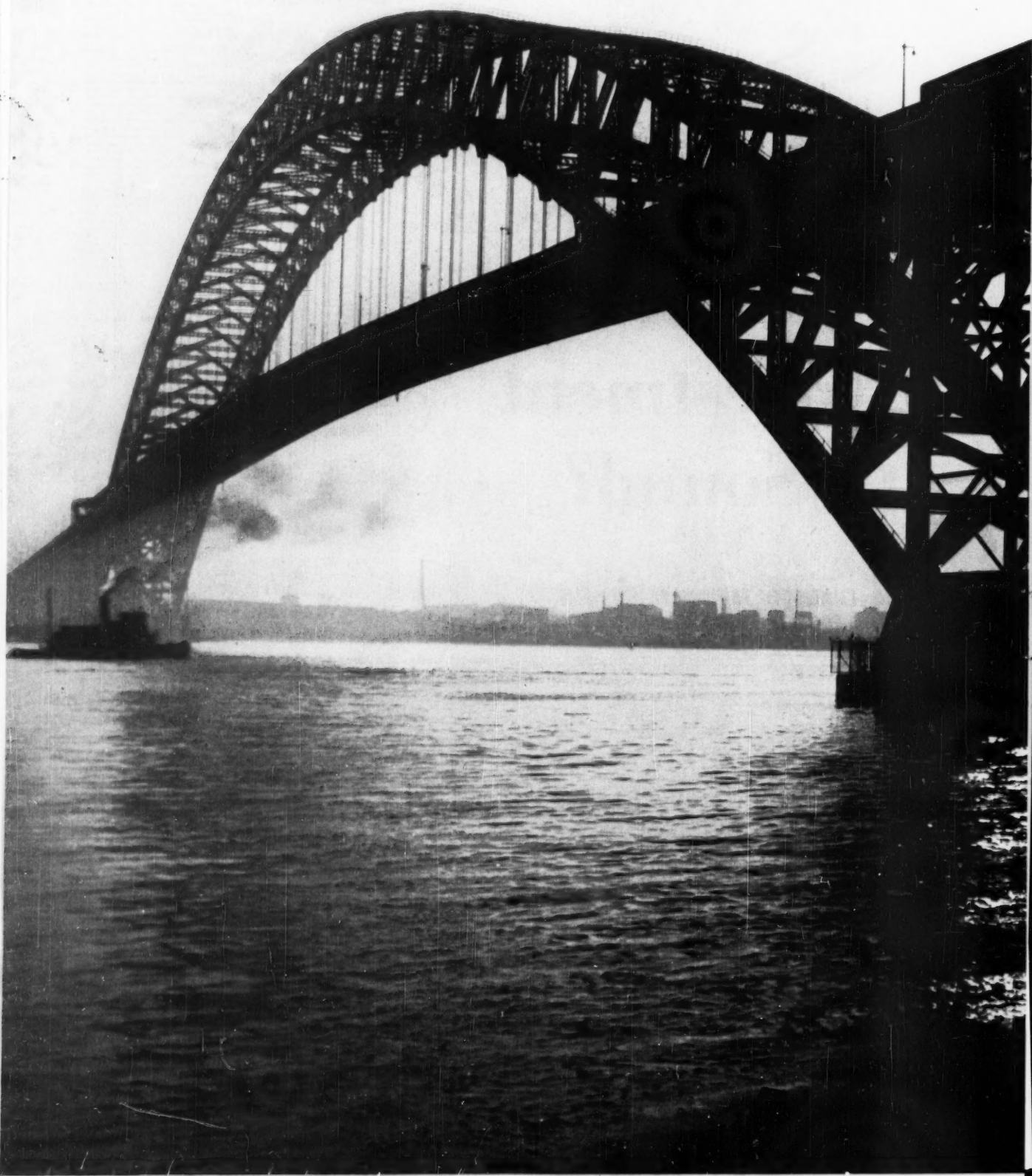
On the practical business basis of transportation costs measured against transportation returns, Fruehauf Trailers are proving themselves sound, profit-building investments on the job. Remember, good equipment means good business. Write today for your free copy of Fruehauf's complete, illustrated Trailer Catalog.

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10 JOBS

FOR THE PRESIDENT

facing the special problems which arise in the small company.

1. FORMULATE COMPANY POLICY.
2. BE FAMILIAR WITH ALL PHASES OF THE BUSINESS.
3. HOLD MEETINGS AS PRESCRIBED BY LAW; SUBMIT TO THE STOCKHOLDERS A BALANCE SHEET AND A THOROUGH STATEMENT OF THE BUSINESS SEMI-ANNUALLY.
4. KNOW YOUR BANKER WELL; CONSULT WITH HIM AND YOUR CHIEF SOURCES OF SUPPLY ON ALL IMPORTANT MATTERS OF FINANCE AND EXPANSION, PROVIDE THEM WITH COPIES OF YOUR FINANCIAL STATEMENT PROMPTLY AND REGULARLY.
5. USE YOUR CREDIT FULLY, BUT DO NOT ABUSE IT; MAINTAIN A STRONG CASH POSITION AT ALL TIMES.
6. PROMOTE COMPANY WELFARE AND INTEGRATION THROUGH YOUR RELATIONS WITH THE DEPARTMENT HEADS AND HAVE A WORKING KNOWLEDGE OF THEIR PROBLEMS.
7. BECOME ACQUAINTED YOURSELF, AND ENCOURAGE YOUR OFFICERS TO DO SO, WITH AS MANY CUSTOMERS AND SOURCES OF SUPPLY AS POSSIBLE SO THAT PERSONAL RELATIONSHIPS MAY BE BROUGHT TO THE ADVANTAGE OF THE COMPANY.
8. PRESCRIBE THE PROCEDURE FOR THE VARIOUS DUTIES OF THE OFFICERS, MANAGERS, SALESMEN, AND SUPERINTENDENTS.
9. SEE TO IT THAT THE OFFICERS AND OTHER EMPLOYEES ADHERE TO THEIR RESPONSIBILITIES.
10. FIND THE FACTS, FACE THE FACTS, FOLLOW THE FACTS.

How To Grow a PRESIDENT

R. J. MAKARIUS

President, Acme Plumbing Supply Company

CONTINUED FROM COVER 1

As the president of a small business, it is your job to be a tax expert; you must know how to save the company money on taxes and still keep out of trouble. My advice is to hire a good accountant who is more interested in good audit and an honest return than one who says he can save you a lot of money.

The small company's directors' meetings will usually be less formal than those of the big companies, but that does not excuse you from making up a clean and concise set of minutes of your meeting and setting forth your observations and recommendations to your board of directors.

It is possible to have a good lawyer on a reasonable retainer fee to aid you in this procedure; he may also be on

call for all inquiries that would come up through the course of business.

Have a good binder for your minutes of meetings and records of dividend payments as you may have to refer to them years after some of your decisions are made.

In your job as president of a small company, you are expected to have knowledge of every phase of the business. You must be a credit manager, sales manager, top purchasing agent, policy setter, and advertising manager.

You will be hounded by every type of solicitor for all kinds of advertising, all of which cost money. Every benefit in town will fail without your financial support. You will be called cheap if you don't contribute, so budget an allowance for each of the different agencies and stick to it. You

*T*HE DECISIONS MADE BY THE PRESIDENT OF A SMALL BUSINESS ARE OFTEN WIDE IN VARIETY AND SCOPE. HERE ARE SOME OF THE PROBLEMS FACING THE TOP EXECUTIVE OF THE SMALL CONCERN, ALONG WITH SOME SOLUTIONS SUGGESTED BY EXPERIENCE.

spend money on advertising to get business. You can give money to charities on a reasonable basis, but do not confuse it with advertising. Know what is tax deductible and what is not.

If and when your company decides to expand, the main decision will be yours as to whether you should freeze

Choosing a banker in whom he may place full confidence is as much a responsibility of the president of the small business as seeing to it that those in charge of his company's financial operations are conducting their duties properly. Over the years, a sound and cooperative relationship with the banker may have constructive results of immeasurable value. The top executive of the small company should foster such a relationship.

up most of your working capital in brick and mortar, or whether you will obligate the company with payments on a mortgage which might far exceed its ability to pay should there occur a recession or the loss of a large customer.

In any expansion plan, be sure to crawl before you walk, and be sure you can walk before you start to run. Many a business got too big for its breeches and went broke because it overexpanded in boom times and could not carry the overhead in times of stringency.

As the stock in a small company is usually closely held and does not have a ready market, it is often impossible to raise new money with a stock issue. Therefore, it behooves you at all times to fight to plow back the majority of your earnings, paying only a reasonable dividend while your company is growing. I cannot stress too much the importance of conservative actions in small, or medium size corporations who cannot raise capital by stock issues and must rely on earnings to grow.

Do not confuse with the invested capital that is permanently in the business, the bank borrowing, either for availing of discount advantages or for temporary capital to fulfill a big contract.

If, through your brains and hard work, you were selected to take on the duties of the president, you would in all probability also take on a staff who has been inculcated with your predecessor's ideas. It will be your job to sift out the best of his policies and disregard the rest after careful consideration. You then have a good foundation from which to start.

Outline, through your new policy, your point of view, your reasons for

such, and tell the staff what you expect of them. Organization is the bulwark upon which you rise or fall. You cannot and should not try to do the job alone. Surround yourself with thinking men who are just as anxious to succeed as you are. Beware of "yes men" who can add nothing to your organization, but may ride on your coat tails and those of the other hard working men.

Give your staff the opportunity to carry out your policies; delegate authority wherever possible; give them an opportunity to put themselves into the job. You cannot delegate authority and then forget it, but you can delegate it and then properly supervise it.

Staff Streamlining

The fellow who advises not to worry about building bridges until you get to them is due for a fall. Build your bridges in your thinking and planning, and when you get to them you do not have to stop, but can go full speed ahead.

Be careful of too much red tape. A junior executive of a large corporation can take over the presidency of a small company and sink it in overhead and systems that have no place in this type of operation. Keep the red tape at a minimum.

To get things done and done properly

can only be solved by adequate compensation. If an employee is good, pay him. You get the credit for what he accomplishes.

Don't play favorites. Give all the employees the same consideration. Your job calls for you to do the thinking. Some individual has to do the thinking and start the ball rolling and, Mr. President, that man is you. If you have your organization set up properly, you will have the time to do this thinking. If not, you will not get anywhere. Do not shirk your responsibility; you are the big boss and are responsible to management.

If someone were to ask me what is the most important decision I ever made, I would unhesitatingly say that is when I decided to heed my father's advice, "Keep your credit good, it is better than your cash." That is the basis upon which I built my business and the policy that brought me through the depression.

For the last 30 years I have kept my bank informed at all times as to what I was doing, how I was making out, what my future plans were, and so forth. I also have always kept my creditors informed with our latest statements and our progress.

Among our larger suppliers representatives, we have what we call members

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CORSON PHOTOGRAPH FROM DUANEY



GANDREAU PHOTOGRAPH

RESEARCH, TO-DAY, IS BIG BUSINESS AND THE KEY TO A PROFITABLE RESEARCH PROGRAM LIES IN EFFECTIVE MANAGEMENT. HERE IS AN ANALYSIS OF THE FOUR M'S OF A SUCCESSFUL RESEARCH PROGRAM—MEN, MOTIVES, METHODS AND MONEY—BY THE DIRECTOR OF A LARGE RESEARCH INSTITUTE.

RESEARCH—*an Industrial Tool*

HALDON A. LEEDY

Director, Armour Research Foundation

IN TO-DAY'S industrialized society the value of applied research is widely recognized as a vital competitive aid and an essential activity for avoiding industrial obsolescence. The rise of organized scientific research has been perhaps the most important single force for prosperity and progress in human welfare in recent United States history. It has certainly been the most dynamic one.

Total research and development expenditures reached nearly \$3 billion in 1952, and some 350,000 persons, working in laboratories with approximately \$4 billion, are given employment by the nation's current research effort. So you can see that research is a big business, and getting bigger all the time.

Rising costs and manpower shortages plague the research administrator, just as they do industry, large or small; but the need for accelerated technological development will continue. As con-

sumers demand ever higher quality, as National Defense requirements become increasingly complex, and as science itself advances into more difficult fields, industry will turn more and more to its own and to the independent research laboratories for solutions to these problems.

Research management is a complex subject, one which demands experience and accumulated judgment on the part of those who practise it. There has been relatively little research done on research itself; therefore, discussing how to perform effective research and what management procedures can be expected to yield best results is still largely a matter of describing research experience. The fact that more articles and books on the subject are appearing is a heartening sign that managing research is becoming a recognized professional activity, just as performing research long has been.

The vital mission of producing useful answers to future pressing technical problems is a heavy responsibility. It means, in essence, that the research scientist must think harder, the research administrator must manage better.

There are four aspects of research management which require constant attention by the men who run research: (1) men, (2) motives, (3) methods, and (4) money.

The acquisition and training of the best possible scientific staff are of primary interest to research administrators. The old saw, "It's not *what* you know but *who* you know," might be rephrased by the research manager to read, "It's not *what* you have but *who* you have."

Expensive equipment, elaborate procedures, and handsome buildings are worthless without high-caliber people. Research is a creative activity, engaged in by talented human beings, and the

research manager's task is as much a matter of psychological understanding as it is of financial balance sheets and technical judgment.

It has been said that research is not a production operation, but more like the growing of a plant. The research manager with a "green thumb" is the one who understands people, especially the type of people who do research.

What does a research man want? A few of the things he wants are proper working environment, avenues of advancement, encouragement of professional development, recognition of accomplishment, freedom from administrative details, adequate compensation, sufficient information on projects, and tactful treatment.

How should research men be selected? There is no manual of rules, although research directors would appreciate one. We can look at a man's record (academic accomplishments, papers published, patents held, performance in previous positions), make a judgment of his scientific breadth (his grasp of fundamental principles), and attempt to analyze his personality (including his ability to work as a member of a team).

Armour Research Foundation and hundreds of other organizations are searching diligently for men who score well in these areas. Part of this country's future depends upon the proper training and selection of such people for research.

An analysis and explanation of why specific research is needed precedes laboratory work. One of the research manager's major responsibilities is to help make investment decisions at the planning stage of projects.

In general, research is motivated by three things:

1. Hope of commercial profit
2. Desire for added national security
3. Scientific curiosity

Industry should turn to research when it wishes to accomplish one or more of these ten objectives:

1. Anticipate and prevent troubles
2. Cure existing troubles or nuisances; decrease rejects
3. Reduce the cost of a product
4. Increase the utility of a product (or utilize waste products) through modification or simply by finding new uses
5. Reduce the consumer's operating or maintenance costs
6. Develop new processes, materials, or products
7. Improve the quality of existing materials or products
8. Bring about better standardization
9. Amass technical information leading to a better understanding of a product or process
10. Contribute to the common store of general technical knowledge, with the ultimate objective of increased markets through raised standards of living

Research must be initiated in the interest of ultimate genuine public benefit. Industry engages in research in an understandable and healthy desire for future profit, but it is the projects which yield public benefit that justify themselves over the long pull. To use part of the nation's inadequate pool of technical manpower for unsound research objectives is both wasteful and shameful. The yardstick of "ultimate public benefit" is a useful one and deserves the

consideration of all research managers.

The use of to-day's industrial institutes and foundations fits into many companies' over-all programs. The outside research organization acts as an extension of a firm's own research laboratory, and the motivations of a sponsor must be understood by the group accepting the "farmed out" research. In accepting a project, the outside organization is careful to undertake only that work which it recognizes as in the public interest. Its reputation and future are at stake, too, and it wants to do a good job for a worthwhile purpose.

This might be a less expensive washing machine, a stronger type of concrete, or a more nutritious breakfast food; but all these projects (and almost all others) can be described as "the practical application of science to better living."

Can there be a more worthwhile objective?

In the independent research organizations there are certain questions all research managers should ask when starting a project. Is this project in the interest of the company and the public? Are the proper staff, necessary equipment, and space available? Does this work conflict with any other research activity, past or present? Are

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There can be only one best track to a full and profitable future. Clouded as that future may seem, research programs are often able to guide the business man on the right track by providing him with methods, products, and ideas that enable him to serve the public. Many successful research programs move straight toward an established goal through an atmosphere of flexibility.





THE BRIMMING MARKET BASKET—GENOBEAU PHOTOGRAPH

Why Customers Change Brands

N. H. COMISH

*Professor of Business Administration
University of Oregon*

*I*N 1952, the author and 27 of his research students set out to discover the frequency with which Oregon consumers change brands of merchandise in 21 classifications and the reasons for changing brands during a period of six years. Some 3,755 typical consumers in the different income groups were interviewed by the investigators.

The results show that merely 120 persons in the total number of people interviewed failed to change brands and that the other 3,635 persons changed brands 24,401 times during the six-year period. The frequency of change mounted with the passage of time. Five years ago there were only 932 changes; four years ago, just 983; three years ago, 1,569 changes; two years ago, 2,784 changes; one year ago, 6,395 changes; and this year 11,738 changes.

Perhaps, three reasons account for the increased rapidity of changes by years. In the first place, consumers remembered switches less clearly as the investigators probed back from year to year. In the second place, the great shortage of goods following World War II, gave consumers fewer chances to change brands than in 1950, 1951,

and 1952 when there was an abundance of articles on the markets. Thirdly, with the passage of time during the six-year period, more and more brands appeared on the markets thereby giving consumers increased opportunities to change brands in the latter years of the period. Indeed, this reason alone intensified the battle of brands.

It will now be interesting to consider the reasons given by the consumers for changing brands and their relative importance. Some of the consumers interviewed gave more than one reason for switching some brands; but most of

them gave just one reason for changing from a particular brand to another in a given classification. The reasons falling into the "Other Reasons" group were so relatively few in number and so comparatively varied that they were not separated for this study.

As to relative importance, the dissatisfaction with the low quality of the branded product is the most significant of all the reasons given for changing brands in the case of the All-Products group and in the instance of the bakery classification. It also stands high up

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DEVANEY PHOTOGRAPH

*I*S IT A LACK OF FAITH, OR JUST PLAIN FICKLENESS THAT LEADS CONSUMERS TO SHIFT FROM ONE BRAND TO ANOTHER? THAT THEIR PREFERENCES CHANGE FREQUENTLY WAS DETECTED BY THE AUTHOR IN A SPECIAL SURVEY. HERE ARE THE ANSWERS THAT PEOPLE GAVE WHEN ASKED HOW OFTEN, AND WHY, THEY DESERTED TRIED PRODUCTS.



WOULD YOU READ A LITTLE *FASTER*

RUSSELL G. RANNEY

*Chief of Special Instruction
Signal Corps Engineering Laboratories, Fort Monmouth*

THE EYE IS FASTER THAN THE MIND. THIS PAGE CAN BE OBSERVED IN A FRACTION OF A SECOND, BUT IT TAKES LONGER TO COMPREHEND WHAT IS ON IT. A SPECIALIST IN THE SKILL OF READING DISCUSSES MANY OF THE ELEMENTS INVOLVED IN FASTER READING—AN ESSENTIAL ART FOR THE BUSY EXECUTIVE.

*R*EADING is a skill just like typing, or swimming, or dancing. . . . Some 80 Air Force officers increased their speed from 291 words per minute to 460 words per minute; some read as fast as 1,100 words per minute. . . . Reading speed increased from 300 words per minute at the start of the

course, to as high as 2,100 words per minute for some individuals at the end of the course. . . . Average reading speed (laboratory speeded) for the Air War College was 1,159 words per minute on standard material. . . . Students enrolled in the Air Tactical School averaged 835 words per minute, with 77 per cent comprehension. . . . One student read at 3,000 words per minute.

These are excerpts from recent reports of reading training programs.

The harried business man who reads such reports thinks he sees relief in sight. He has seen the load of paper work piling up and the creative part of his job sinking beneath it. If he could only read faster, he'd do a better job on the paper work and he'd have more time for more important things. Is he right?

Many business houses have thought so and have employed reading specialists to train their people. In some cases

the employees have found a new and satisfying success in dealing with paper work; others have been less convinced of the permanent value of the training and of its application to their problems.

They have some questions: What sort of material was read at 3,000 words per minute? Just what was measured by the comprehension tests? Perhaps a re-examination of the basic problem is in order.

First, everybody agrees that the reading load for people in business is increasing all the time. This is true not only for the executive, but also for the minor supervisor and the secretary. It is not generally realized how greatly reading enters into the work of people in business. Even the machine operator has a reading problem, although a quite different one from that of the executive.

Many an executive is uneasily aware of his own inability to grasp quickly

the meat of what he is reading, but he doesn't usually realize that most of his colleagues are in the same boat. It is actually true that the general level of reading skill among educated, successful people is far below their requirements. The result is that communication, which is the chief reason for writing and reading, breaks down.

During the period when I taught at the New York University Reading Clinic I started my courses by asking my students to read a short selection and then to sum it up in a single sentence of their own choosing. Most of the time they missed the main point and remembered something of less significance.

Slow but Not Backward

The students were not backward, but were rather above the average in intelligence and educational background. Numbered among them were lawyers, physicians, accountants, clergymen, engineers, editors, college professors, and people in many fields of business, including officers of nationally-known corporations.

The one thing all these people had in common was that their work called for efficient reading, and that they wanted greater skill. An occasional exception was the person who wasn't concerned with business at all, but who simply wanted to get greater satisfaction from reading for personal improvement and pleasure.

A rather touching case was that of the middle-aged lady who told me, "Now that my children are grown up I have time to read, but I read so slowly that I can't seem to get interested in what I am reading. My daughter gets so much pleasure out of reading, and I want to learn how to read well, too."

For a number of years I have been responsible for reading training for the engineers and other civilian and officer personnel at the Army Signal Corps Engineering Laboratories at Fort Monmouth, N. J. During that time I have administered to some 2,000 people reading tests measuring their ability to read and to comprehend difficult material. The questions asked require them not merely to remember what they read, but also to evaluate and interpret, to draw reasonable inferences.

Scores are given in terms of percentiles showing their relative placement among typical college graduates, according to norms set up by the American Council on Education. Scores range from 99, in the top 1 per cent, to 1, the equivalent of a third grade reader. The 50th percentile, or average, can be attained by a surprisingly small degree of accomplishment, an indication of the generally low level of reading skill.



Those tested at Fort Monmouth averaged below 50, with some responsible workers at the very bottom of the scale. Lest anyone consider this proof of the mediocrity of Government workers, I should mention that I have given the same tests to officers and executives of large corporations with exactly the same result.

It is probable that the people tested would have done better when they were in college, before they had lapsed into inflexible reading patterns. It is true, also, that engineers, like lawyers, accountants, scientists, and other highly specialized people, tend to be poorer than average readers. Their training emphasizes detail and they have a tendency to devote so much attention to single words that they lose the thought of what they are reading. It may be some comfort for the man who is aware of his shortcomings in reading to know that he has plenty of good company.

Why do so many otherwise capable people read so poorly? The reason is not hard to find, but as an old school teacher I hate to give it. It's simply that they have never been taught how to read, at least not in terms of the skill that they need.

In the great bulk of the schools in this

country reading as a skill subject is taught only through the fifth grade. Later courses under the title of *Reading* usually consist primarily of an appreciation of literature. There's nothing wrong with this except that it's putting the cart before the horse.

Dr. Stella S. Center, pioneer in advanced reading training, said 25 years ago that high school students were being asked to study the style of Julius Caesar and the other standard classics when they weren't capable of understanding what they were reading. Every high school teacher can point to the boy who is failing in math or science or history, not because of any lack of intelligence, but simply because he can't understand the text which is an integral part of his course.

Handicapped by Habits

A great many adults have been handicapped in college because their bad reading habits made their studying unnecessarily laborious. Many are still sub-vocalizing; that is, reading at the speed at which they could pronounce the words, simply because of an early school emphasis on oral reading. Many others are good readers according to the usual standards for educated people, but would find their efficiency greater and their work easier if they could get through their daily reading assignments more rapidly and with better comprehension.

Somehow or other, some people automatically progress in their reading and develop exceptional skill. Most people, however, lacking the positive instruction that they need, remain at a low level.

If I have labored my point, it is only because of my firm conviction that most workers in business don't read well enough to do their work as well as they could otherwise. I am sure that many companies share this belief and that they have set up reading training programs on company time and at company expense primarily because they think the gains will more than offset the cost.

Here we come to the most difficult part of the problem. That is, what sort of course to have, whom to hire, and what to expect in the way of results.

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BEHIND THE WORLD'S WINDOWS PART II

A. G. MEZERIK
UN Correspondent

INCOME and housing are among the problems shared by the people of the world. To understand these and other problems, DUN'S REVIEW presents this two-part article based upon a United Nations survey of world social conditions. The first part, in the February issue, discussed the rôle of health, education, and agriculture in the formulation of social policy. Here is a study of two other fronts.

HOUSING is one front. No country is without a housing problem. Swift population increase—combined with the effects of war and economic stress—has everywhere aggravated the housing situation. In the less-developed areas where economic resources and technical means to cope with the problem are lacking, the need is greatest of all.

Shameful congestion and slum con-

ditions are the rule in dozens of cities. Industrialization, migration of peasants unable to support themselves on the land, and in some areas floods of refugees have resulted in mushroom growth of city slums in Asia, Latin America, and Africa. The typical city family in these areas lives in a single room, frequently with no private cooking, bathing, or toilet facilities. Around the cities which have grown most rapidly are slum suburbs of huts built of tin cans and other scrap. No vestige of water supply or sewage disposal can be seen in many of these areas.

In Latin America the most common form of city housing, above the squatter level, is one in which a number of single rooms open on a courtyard in which is located the water tap and whatever provision there may be for cooking, washing, and sanitation. In Southeast Asia it is the rule rather than the exception for one or more families to

occupy a single room. In the Malay countries villages are often built in a single row over a stream, which conveniently doubles for a drain; an improvement over most urban and rural housing where, more likely than not, there is no drainage at all.

The huge magnitude of housing needs in the under-developed countries precludes an era of large-scale construction of durable homes with brick walls, tile roofs, and concrete bases. In many countries the present approach is to "help the villagers help themselves" by encouraging better designed and sturdier huts and sanitary latrines—built, however, of traditional materials and patterns. As long as 150 million people need housing, the day of adobe, bamboo, and thatch is far from over.

In the industrially advanced countries the housing shortage is also acute. More than 30 million family dwelling units are needed. Europe's housing

problem is not a new one. It goes back to the Nineteenth Century. The demand for urban housing created by the industrial revolution and the rapid drift to the cities was never met. The two world wars therefore aggravated what was already a chronic condition.

Some idea of the size of Europe's housing job can be gathered from the expert guess that it would take an average of 22 years to meet the known housing needs of 17 European countries. And that estimate is predicated on doubling the pre-war rate of construction from about 800 thousand to 1.6 million units per year. Moving at that accelerated pace the housing need would be fulfilled in six years in Sweden and 150 years in Greece—with other countries at stages in between.

Our own United States could use an additional house or two—more precisely about a million and a half additional housing units each year for ten years—if current needs are to be filled, deficits eliminated, and substandard units replaced. Most of this housing is needed in cities—quite logically—since United States population is 85 per cent urban. However, housing currents in

our country are not fully predictable since one person in five changes his residence each year.

Clear it is that, around the world, lack of adequate housing is chronic; varying, of course, in intensity and degree of need.

Where people live is assuredly important. Where they work is no less significant. On this front things are better to-day than they were, say, 60 years ago. It was about that time that goals were set which have been long achieved in many countries. In others, where labor conditions lag behind, the poor conditions are no longer accepted with equanimity either by the public or by responsible authorities. The eight-hour day and the 40 to 48-hour week are to-day recognized in the great majority of countries. Side by side with this recognition has grown a tendency to provide more job security in employer-employee contracts.

An important movement which is taking place in the more highly developed countries is a levelling up between the wages of the unskilled worker and the skilled worker. In Rangoon, Burma, for instance, an un-

skilled worker on building construction gets only 25 per cent of the wage of a carpenter, whereas in London or New York he gets 85 per cent and in Stockholm 90 per cent. Improvements have been even more marked in the field of industrial labor, and particularly among workers in those large-scale industries where conditions can be relatively easily controlled.

Mostly Home Craftsmen

But modern large-scale industry is still comparatively rare across the world. In Asia the major portion of industrial output is still produced by handicraft industries scattered in numerous households and small workshops. In China, some years ago, there were 10 million handicraft workers and only 1 million factory workers. About 78 per cent of the total manufactured output came from the handicrafts—only 22 per cent from the factories. In Burma the full-time spinning and weaving of textiles occupied 52,000 workers, but only 7,000 were in textile factories, the remainder in small units. Japan, by far the most industrialized Asian country, had but 4.6 million in factories out of a total employed population of 37 million.

The huge labor pool of Asia is a deterrent to high wages or even to standard wages. In the same industry and locality there may be a divergence of 100 per cent between the wages paid for the same work by different employers. This is especially true where the employer has the right, arranged by advancing money, to command the services of the whole family without any additional payment.

In Latin America, the small-scale establishment is similarly the rule. In Argentina, the average number of workers per industrial unit is thirteen, in Brazil it is ten. In Mexico it is twenty and in Uruguay nine. In all Argentina only 56 factories employ more than 1,000; in Colombia, four.

In both Asia and Latin America the low status accorded manual labor is a barrier to good labor-management relations and to the formation of a body of skilled labor. A man who has attained some education seeks a white-collar job to raise his social standing.

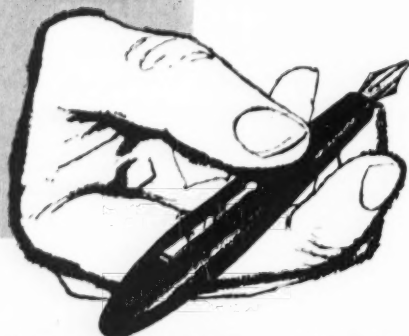
The impetus for the improvement

SUCKESANT DOWN AND PETER COOPER VILLAGE, NEW YORK CITY—THOMAS AIRVIEWS PHOTOGRAPH



Housing programs in many cities throughout the world have converted a number of substandard dwellings into civic symbols of enlightened social effort. But it takes more than just a strong desire to replace such crowded, dismal pyramids of poverty that have been built through years of suffering, neglect, and ignorance. Often the destitution and lack of knowledge upon which slums are built also serve as an unyielding bulwark to preserve them. And the will to improve must be backed by a knowledge and ability not easily acquired under such conditions.

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of labor conditions has not come—in the under-developed areas—from organized labor, excepting in the big cities. It has come from government and from the scientifically trained personnel from Europe or the United States who manage the bigger, more complicated modern enterprises.

Under the influence of this new type of manager, many of the large concerns have taken steps to reduce labor turnover by improving working conditions and moving wages to a level which permits a decent standard of living. This combination—modern managers and awakening government leadership—has led several countries to introduce minimum wage legislation and to set up industrial tribunals.

Farm Retardation

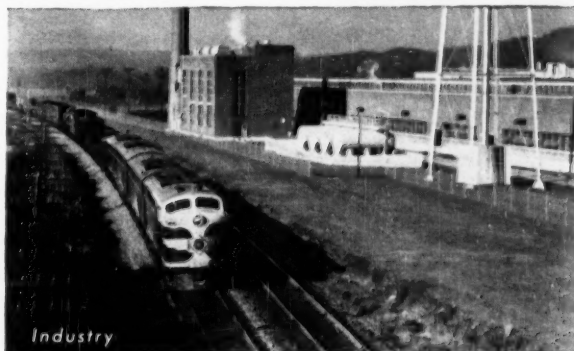
However, very little of the world's labor is employed in industry. In all but a few of the most highly industrialized countries, agriculture is still the greatest employer of mankind. In the less developed areas, more than 60 per cent of the population is employed on the land. Social security measures, labor legislation, and various measures for the general welfare have had little or no effect on agriculture workers.

Excepting for a few countries, among them Australia and New Zealand, the level of wages in agriculture nowhere approaches that of industry. Whether independent farmer, tenant, or hired laborer, each worker in agriculture faces problems of security. The prosperity of independent farm operators goes up or down propelled by forces far away from the farm, sometimes in distant countries. Natural hazards are formidable everywhere. In under-developed countries the hazards are more serious because only primitive methods exist for coping with them.

Droughts hit many parts of the world. Floods are perennial threats. In the Far East alone 250 million people—about 22 per cent of the population—live under the protection of dykes. Some 90,000 square miles flood each year and destroy livestock, crops, and buildings as well as human beings.

Tenants, share-croppers, and hired labor have their own problems of insecurity, of tenure, and of employment. And all agriculture knows the same ironic fact. A good harvest does not

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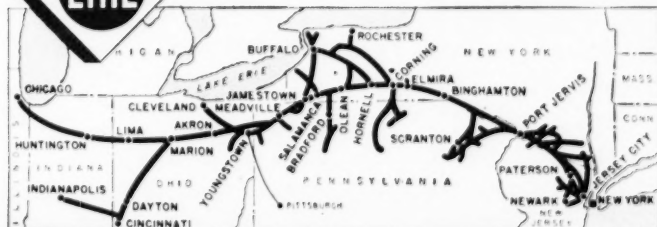
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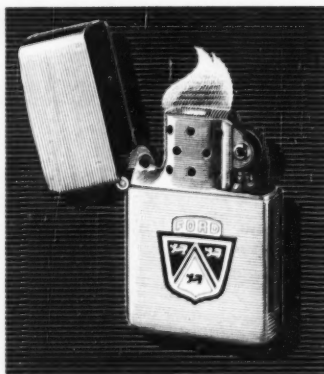


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necessarily mean more prosperity. Bigger crops may mean drops in prices and less money. The list of obstacles is long indeed, culminating now in a new one born of modern technology. Rubber, cotton, jute,—all agricultural products—are under the ever-present threat of displacement by synthetics, such as nylon. Insecurity, lack of protection by law, and dire poverty make it seem as though the peasants of the under-developed areas are indeed the forgotten men of the 20th Century.

Family Structure

The rapidly growing cities in Asia, Africa, and Latin America contain large floating populations of people who, just the other day, were living in the bosom of their families in farming villages. There, in the rural areas, the family is the basic welfare unit.

In Latin America the family traditionally includes those whose kinship is as distant as cousins several times removed. Moreover godparents and godchildren are added to family and form ties of mutual aid between friends. The traditional ties between *compadres* sometimes involve employer and employee, landowner and share-cropper.

In the Middle East the rural family consists of an elderly male head and all his male descendants and their wives plus all unmarried women. This family unit is the basis of the rural Middle Eastern economy, owning the land and working it jointly. In the Far East the extended family is likewise the economic unit as well as the social unit.

None of these family units permits an individual belonging to it to sink into helplessness and despair. All assist their unfortunate—the sick, the unemployed, the handicapped, and the aged.

The family's feeling of responsibility is also grounded in religion—such as Christian charity. Alms-giving is one of the Five Pillars of Islam, and Moslems give alms to relatives as a religious duty to an extent which represents as

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much as 10 per cent of their income. The family with the religious spirit and institution has been the basic welfare institution and it stood up, for better or for worse, as long as everyone stayed in the bosom of the family or unless a great natural calamity such as a flood wiped out the whole community.

Social Transition

But as communications improve and people move around seeking relief from poverty, the family is disrupted. Male workers come to the mines or to the city seeking jobs, leaving their families behind. Children strike out for themselves. The large kinship circles at home are fragmented, the family's capacity to help in time of trouble is destroyed. Meanwhile, social welfare services, labor laws, and other forms of legislation must be substituted. It is this process of transition which is now taking place in so much of the world.



MONKMEYER PHOTOGRAPH

The process of developing services also continues in our part of the world, marked by voluntary pension and medical plans as well as by legislation. The welfare problem is as old as organized human society. In our time it has taken on special significance not only because of its ideological implications and its huge scale, but also because of the recognition that some aspects of welfare, such as for children and for refugees, have become an international responsibility.

The world picture is full of contrasts, one of the most significant of which is the wide difference in income between the most advanced and least developed areas of the world. The gap is not being closed; in fact it widens.

Here are the two extremes. North America, with less than one-tenth of the world's population, produces almost 45 per cent of the world's income. Asia,



You know that New Jersey, Crossroads of the East, is situated in an ideal location for industry, right in the middle of the world's richest markets of New York and Philadelphia

But did you know that products manufactured in New Jersey can be delivered overnight to states which have 31 per cent of the nation's population? A 250-mile circle, centering on Trenton, encompasses or intersects twelve states and the District of Columbia. This area has a population of more than 48 million people.

From a market analysis standpoint, it is important to note that these people represent more than 76 billion dollars of effective buying income after deduction of federal income taxes. It is the highest income market in the nation with an estimated income average of \$5,532 per family, as compared with a national family income average of only \$5.086

Annual retail purchases during 1951 were estimated at approximately 50 billion dollars in this regional market, thereby accounting for 33 per cent of the nation's retail sales.

If you have a product to sell to this tremendous market, you should investigate the opportunities which can be yours if you locate your business in New Jersey, the Crossroads of the East.

For more details about what New Jersey offers all types of industry, write for your copy of the booklet, "An Industrialist's View of the Crossroads of the East." Write Box A, Public Service Electric & Gas Company, 78 Park Place, Newark 2, N. J.

PUBLIC SERVICE
... AT THE CROSSROADS OF THE EAST

Meet the V.P.!!



STYLED BY CARL OTTO
ACTUAL PHOTOGRAPH

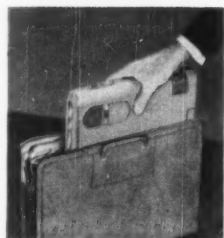
*The new-fashioned individual dictating instrument
with the trim, book look ... another EDISON first!*

So sturdy... because there's solid EDISON quality beneath the V. P.'s striking good looks! It's built to take the toughest daily desk use! Luxuriously designed, magnificently engineered, it will win your respect as a tireless office companion.



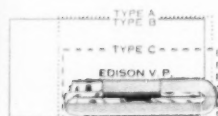
So light... you simply tuck it under your arm—like a book! Take your V. P. along—to meetings, conferences, conventions. In the office or at home, cross-town or cross-country, your personal "electronic secretary" records as you go, like a high-speed camera!

So small... you now can slip your desk dictating instrument right into your briefcase or bag! No more lugging extra carrying cases around. And note: with this pint-sized prodigy along, you have *complete* dictation service always available—transcribing as well as dictating.



... there's no comparison

between the V. P. and other individual dictating instruments! The diagram shows you the measure of Edison's amazing achievement. The V. P. is smallest, lightest, easiest to carry—and it's Edison all the way, from its unique 4-in-1 control and Automatic Disc Positioning to its Diamond Recording. Yet it's priced below the market!



THE EDISON VOICEWRITER V.P.



The superb EDISON Diamond Disc captures the full tonal range of EDISON High Definition Recording. It is standard—and interchangeable—on all EDISON disc equipment. Thus, the V. P. integrates perfectly with EDISON TELEVOICE, the new-fashioned phone system of dictation.

Thomas A Edison
INCORPORATED

**TAKE 11 MINUTES
TO SEE IT IN ACTION!**

We'll be glad to demonstrate the V. P. to you—in only 11 minutes—at your convenience. No obligation. Send coupon—or phone nearest EDISON VOICEWRITER representative (see classified directories).

with over half the world's population, produces only 11 per cent. Furthermore, by 1949 or 1950, most of the countries of Europe and North America had higher per capita incomes than in the pre-war period, whereas by 1949 most of the Far Eastern countries had not yet recovered pre-war levels.

Income Distribution

National income figures don't tell the whole story. They are overly simplified. On the one hand, they do not allow for the worth of the food which a farmer grows for himself and his family. Nor do income figures include the value of the labor which a person puts into building a house for his family or the value of the family's labor in work such as making clothes or milling cereals. A farmer who, with his family, does all these things may have a low income, but a city dweller who wanted to get the same products and services might require a sizable income.

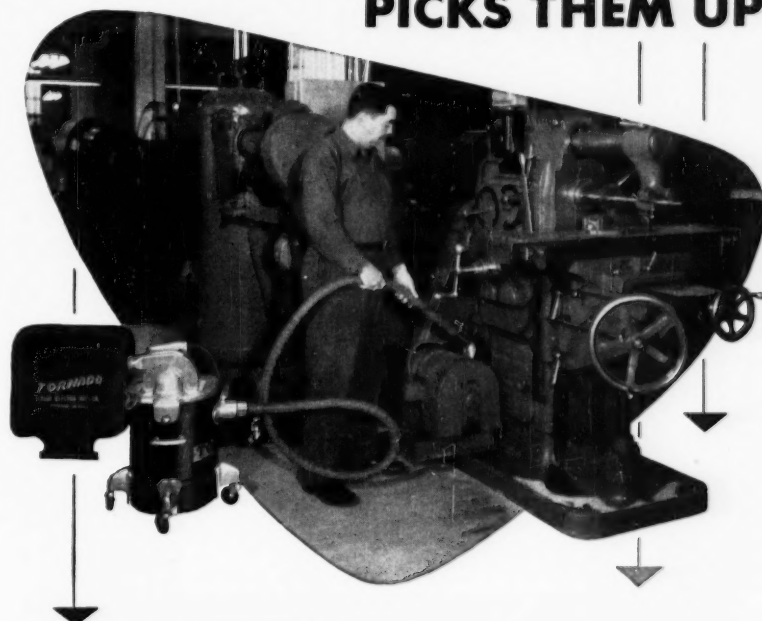
On the other hand, national income figures don't show up disparities as between the rich and poor inside a country. In under-developed countries the richest tenth or twentieth of the population receive a greater proportion of the total income than does a similar fraction in countries such as ours. In Canada, Denmark, Sweden, and the United States the richest tenth get around 30 per cent, but in Colombia 2.6 per cent get that much.

The distribution of income within the United States shows the emergence of a hopeful pattern which may, one day, mark the income patterns of much of the world. A levelling process seems to be taking place. This levelling is



"Anybody else deem it a high privilege to pay taxes?"

When "The CHIPS are Down" **TORNADO®** PICKS THEM UP



Up the Stairway

Just remove the motor unit, snap it to shoulder harness and you're ready to clean stairways or hard-to-reach spots.

The Punch-Lok Company of Chicago, Illinois found that machining forgings left an accumulation of metal chips which was messy and interfered with production. The answer—a powerful Tornado vacuum cleaner.

They now clean their machinery in a matter of seconds—collecting all the chips and dirt in the vacuum tank ready for quick and easy disposal.

Tornado is the most efficient, dependable vacuum cleaner you can use. Air speeds through this machine faster than 300 m.p.h.

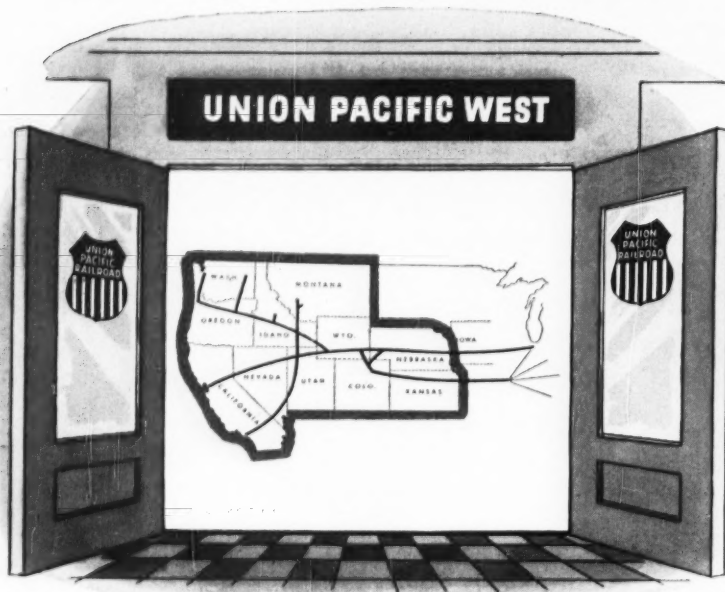
If you are "caught with your chips down" or need to pick up any dirt, water, scrubbing solutions or oil, Tornado is the machine for you.

WRITE TODAY FOR BULLETIN 600

BREUER ELECTRIC MFG. CO.

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The doors to the Union Pacific West..



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Somewhere in this vast western area there's a location that's ideal for your requirements . . . for manufacturing, assembly, distribution, warehousing or some other purpose. Furthermore, there are many material advantages and attractions that make for employee contentment.

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* * *

Be Specific - Ship Union Pacific

UNION PACIFIC RAILROAD

being achieved not so much by reduction in the incomes of the rich as by increases in the incomes of the poor made possible by over-all increases in national income.

It is clear that inside the countries with relatively high and expanding national income the poorer groups are receiving a larger share of the total income. Wage differentials between occupational groups are narrowing. Progressive labor legislation and systems of social security are defining minimum levels of welfare below which society does not permit individual members to sink; and these levels are being progressively redefined upwards.

Possible Abundance

This is the world social picture, replete with dark spots, here and there containing a bright and shining light. The picture would look bleak were it not for certain facts. Though many people are hungry, the food-producing capacity of the earth can be expanded by improving methods of cultivation, recovery of wastelands, exploitation of marine and inland water's potentials, and by other means. Though many people lack necessities, housing and goods can be created through industrialization. Though many people are sick, mass-disease can be prevented.

These are facts and they are encouraging. Beliefs there are also. For the first time nations strive consciously to aid each other. Simultaneously with the growth of the idea that countries should help each other—part of an international ethic of mutual aid—there has spread among the impoverished peoples of the world an awareness, heightened by modern communications and movements of men, that higher standards of living not only exist for others, but are possible for themselves.

Fatalistic resignation to poverty and disease is giving way to the demand for a better life. The demand is groping and uncertain in direction, charged with conflicting emotions regarding the old and new, but it is nonetheless a force that is establishing an irreversible trend in history.

It is against the background of this ethic and this demand that conditions across the world must be seen.

THE END

The oil industry discovered Microfilm copies cost less than carbon copies

If you are now using carbon forms in your sales or other operations, it will be interesting to note how leading oil companies have cut the cost of their "credit card" operations with Recordak microfilming.

Before . . . dealers used to send the original sales ticket and a carbon duplicate to the home office as a record of each purchase. Here, the carbons were filed . . . and the originals were sent to the customer with the monthly bill.

But now a simplified sales ticket—with one less carbon—is used. Only the original ticket is forwarded to the home office . . . where it is microfilmed . . . and then sent out with the bill.

This routine, in addition to cutting sales book costs, gives the home office other advantages—a microfilm record that will remain intact . . . and can be filed safely in 1%



of the space previously required. Also, it cuts clerical expenses substantially because there is only one ticket to handle—instead of two—for every purchase.

Only one example, this, of the way the oil industry uses Recordak microfilming.



65 different types of business

—thousands of concerns—now using Recordak microfilming . . . to photograph documents *instantaneously*—for a *fraction of a cent apiece*; to simplify accounting routines; to save up to 99% in filing space; to increase protection.

Your business?

Regardless of its type or size, you should investigate Recordak microfilming soon. For the chances are this truly remarkable photographic process is already simplifying routines which are similar to yours . . . *doing a more efficient job at a fraction of your present costs.*

Write today for detailed information on the process . . . and the complete line of Recordak Microfilmers *now offered on a surprisingly low-cost purchase or rental basis.* Recordak Corporation (Subsidiary of Eastman Kodak Company), 444 Madison Avenue, New York 22, N. Y.

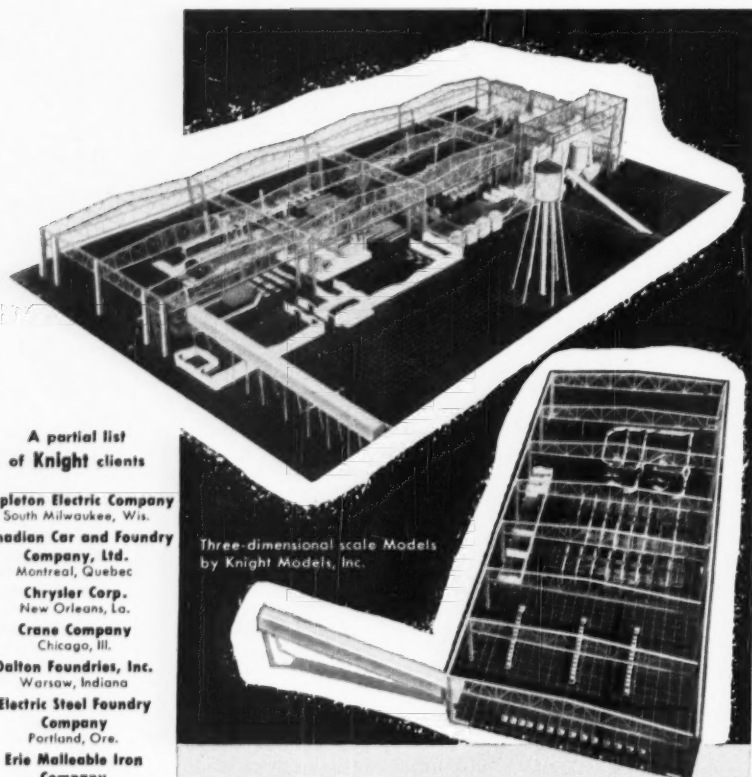


RECORDAK

(Subsidiary of Eastman Kodak Company)

originator of modern microfilming— and its application to business systems

"Recordak" is a trade-mark



A partial list
of Knight clients

Appleton Electric Company
South Milwaukee, Wis.
Canadian Car and Foundry
Company, Ltd.
Montreal, Quebec
Chrysler Corp.
New Orleans, La.
Crane Company
Chicago, Ill.
Dalton Foundries, Inc.
Warsaw, Indiana
Electric Steel Foundry
Company
Portland, Ore.
Erie Malleable Iron
Company
Erie, Pa.
Fahrerly Limited
Orillia, Ont.
Fairbanks, Morse &
Company
Kansas City, Kan.
Hammond Brass Works
Hammond, Ind.
Haynes Steelite Company
Kokomo, Ind.
Macfarlane
Sagua la Grande, Cuba
Moline Malleable Iron
Company
St. Charles, Ill.
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Corporation
Glassport, Pa.
Pyle-National Company
Chicago, Ill.
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Winterthur, Switzerland
Unitrust Corporation, Ltd.
Sherbrooke, Quebec
Universal Castings
Corporation
Chicago, Ill.
Wagner Malleable Iron
Company
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Three-dimensional scale Models
by Knight Models, Inc.

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Knight Engineering Experience

Knight Engineers have had from 10 to 30 years of successful experience in solving all types of management, production, and equipment problems, including the design and construction management of complete new plants and equipment.

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Combine the broad experience of Knight Engineers with your organization's knowledge of its specific problems, and you will secure the most efficient operation and the best solution to the problem.

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BRANDS

(Continued from page 29)

on the ladder of reasons for changing furniture brands, being exceeded only by the suggestion of the salesperson and the dissatisfaction with style. In terms of percentage, quality stands at 21.03, at 31.87, and at 14.70 per cent respectively in the instances of the all-products group, the bakery classification and the furniture category.

Dissatisfaction with high price ranks second in importance for changing brands when all the 21 classes of products are taken together. But high price is only about one-half as significant for brand changes in the bakery classification and less than one-fourth as important in the furniture group as in the all-products classification. On a percentage basis, high price is given a rank of 14.49 per cent for brand changes in the first group; 7.48 per cent in the second and just 3.23 per cent in the third.

Brand changes caused by suggestive advertising is third in importance as a reason in the case of the all-products group. And it ranks high as a cause leading consumers to change brands of bakery and furniture items. In the first of these two latter groups, advertising is only exceeded in significance by dissatisfaction with quality and a suggestion made by a friend. In the instance of furniture, advertising's importance is exceeded by the suggestion of a salesperson, and a dissatisfaction with style and with quality. The percentages for advertising stand at 12.84, 18.56, and 11.57 respectively for the three categories.

Suggested by a friend is fourth in significance causing consumers to change brands in the all-types group. It is second in importance in the bakery classification and fifth in the furniture group. Or percentagewise, it stands up the ladder at 11.38, 18.98, and 10.63. Suggestions made by friends for brand changes are, therefore, relatively significant in all the categories.

Effective salesmanship in the battle of brands ranks fifth among the reasons which lead consumers to change brands in the all-products group. As a cause for switching brands, it is sixth in the bakery classification and first in the furniture category. Respectively, effective salesmanship stands on the percent-

age gradation at 11.15, 4.77, and 18.04.

As a reason for changing brands, consumers' dissatisfaction with style is relatively unimportant in the all-products group and the bakery classification. But it ranks high up the ladder of reasons in the furniture group, standing percentagewise at 15.46 per cent. In fact, it is second in significance among the reasons prompting consumers to change brands of furniture. Perhaps, that is to be expected inasmuch as style plays a greater rôle in furniture than bakery products or most of the articles in the all-products group.

Choosing Shifts

The other reasons for switching brands in the different categories are even less significant by and large. The other reasons are: dissatisfaction with the concern selling the article, dissatisfaction with workmanship, and suggestions made by such organizations as Consumers' Union.

But of what value are the results of this research study? They are fundamentally significant to manufacturers, wholesalers, retailers, advertising men, and salespeople. This research project shows that nearly all people are continually changing brands in view of the fact that merely 120 out of 3,755 consumers interviewed failed to change brands, and that the 3,635 persons made 24,401 switches during the six year period covered in the survey.

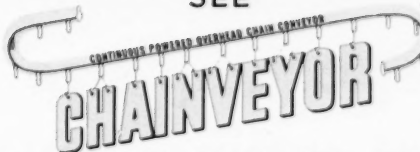


GENDREAU PHOTOGRAPH

It likewise shows that different factors cause different consumers to change brands. It reflects the rôle low quality and high price plays in brand changes; low quality being considerably more significant than high price as a cause for switching brands. Indeed, quality outranks price in every one of the 21 classifications with the sole exception of



SEE



Before Buying Light Trolley Conveyors

Engineered for dependable overhead conveying, the Chainveyor, a light-duty, fully enclosed, continuous chain conveyor is indeed an outstanding performer. Extremely flexible with short radius curves and straight tubular track sections, the Chainveyor is easily installed and adaptable to unusual situations. The Chainveyor is, in fact, completely practical everywhere light overhead conveying equipment is required.

*The Chainveyor is manufactured by United States Spring and Bumper Co. of Los Angeles, Calif., and distributed nationally by Mathews Conveyor Company.

Write Today for Illustrative Bulletin No. CV-52

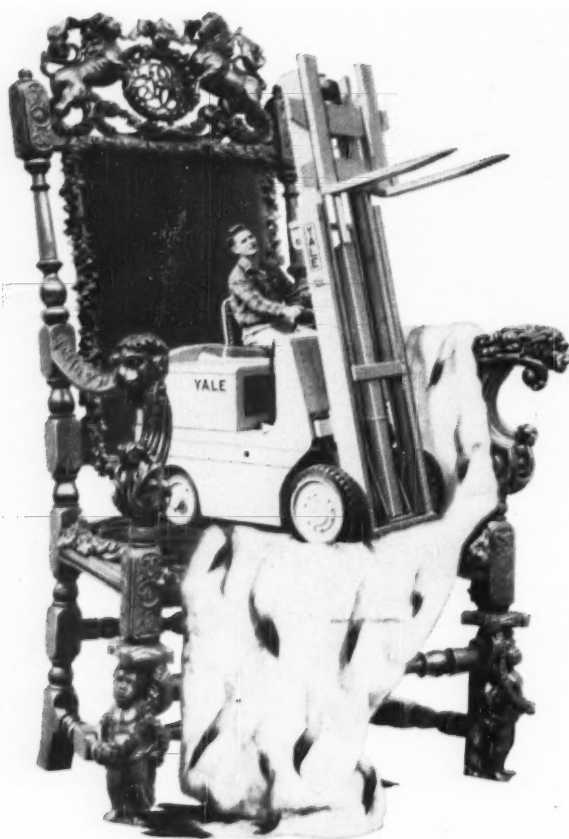
Sheet Metal Fabricating

Small Parts

Poultry Processing

Frozen Food Handling

Engineering Offices or Sales Agencies in Principal American and Canadian Cities
 General Offices, Mathews Conveyor Company Ellwood City, Pennsylvania
 Pacific Coast Division, Mathews Conveyor Company West Coast . San Carlos, California
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Does a king-size job at cutting costs

In many businesses, materials handling expenses account for as much as one-third of total costs.

And because this is usually the only area in which major economies are possible, YALE Equipment can be your number one money-saver...releasing manpower from manual handling...cutting handling costs as much as 75%.

YALE offers the most complete line of Trucks and Hoists...including Gas, Diesel and LP-Gas trucks with exclusive Fluid Drive.

You, too, can get results like these:

Sugar industry used YALE EQUIPMENT to cut shipping costs *three-quarters*... increase profits.

Bottling manufacturer used YALE EQUIPMENT to reduce handling man-hours *by half*...increase profits.

Food chain used YALE EQUIPMENT to *triple* warehouse space.

Important California industry used YALE EQUIPMENT to save \$196,000 yearly...increase profits.

SEND FOR The Picture Story of Yale Materials Handling Equipment

YALE*

MATERIALS HANDLING EQUIPMENT

GAS, ELECTRIC, DIESEL LIFT TRUCKS
WORKSAVERS • HAND TRUCKS • HAND
AND ELECTRIC HOISTS • PUL-LIFTS
Yale Hoists are sold exclusively through
INDUSTRIAL DISTRIBUTORS

*Registered trade mark

MAIL THIS COUPON TODAY

The **YALE & TOWNE** Manufacturing Co., Dept. 593

Roosevelt Blvd. and Haldeman Ave., Phila. 15, Pa.

☐ Please send my free copy of Picture Story of
Yale Materials Handling Equipment.

Company _____

Name _____ Title _____

Street _____ City _____ State _____

In Canada write: The Yale & Towne Mfg. Co.,
Box 337—Postal Station "A"—Toronto

the grocery category. The influence of advertising, friendships, and salesmanship are decidedly potent in causing brand changes in many of these classifications.

Competitive Weapons

Armed with these facts, producers and middlemen can induce more consumers to change brands by more effective advertising and better salesmanship. For nearly all the high unit cost items considered, effective salesmanship changes more brands than any other factor. If applied properly, it could change a greater number of brands in the instance of the lower unit cost items.

NUMBER OF BRAND CHANGES BY 3,635 CONSUMERS

YEAR	All Products	Bakery Group	Furniture Group
1952	11,738	932	372
1951	6,395	517	199
1950	2,784	155	175
1949	1,569	135	105
1948	983	73	57
1947	932	51	48
6-year total	24,401	1,863	956

PER CENT OF BRAND CHANGES BY 3,635 CONSUMERS

YEAR	All Products	Bakery Group	Furniture Group
1952	48.10	50.03	38.91
1951	26.21	27.75	20.82
1950	11.41	8.32	18.31
1949	6.43	7.24	10.98
1948	4.03	3.92	5.96
1947	3.82	2.74	5.02
6-year total	100.00	100.00	100.00

Advertising could by stronger appeals likewise change more brands in all categories. More effort could be expended in satisfying more consumers so that they will persuade their friends



"Here it's ten o'clock already and that type-writer isn't even warm yet!"

to change brands. Friendship properly exerted is a vital factor in the "battle of brands." This fact should never be forgotten by the advertisers or by the salesmen in efforts to cause consumers to switch brands.

The Man Who Owns One

Moreover, other things being the same, manufacturers should produce a greater percentage of high quality goods and wholesalers and retailers should stock a proportionately greater quantity of high quality items. By so doing, more consumers would be satisfied and convince their friends that they should buy more, not fewer, high quality brands.

REASONS GIVEN FOR CHANGING BRANDS

REASONS	All Products	Bakery Group	Furniture Group
All reasons	25,877	1,886	1,054
Dissatisfied with low quality	5,442	601	155
Dissatisfied with high price	3,751	141	34
Suggested by advertising	3,323	350	122
Suggested by friend	2,946	358	112
Suggested by salesperson	2,886	90	190
Dissatisfied with style	2,064	26	163
Dissatisfied with retailer	1,561	72	62
Other reasons	1,390	154	42
Dissatisfied with workmanship	1,331	23	98
Suggested by consumer organization report	1,183	71	76

In a word, the battle of brands, is more likely to be won by high quality brands than low quality ones, and by high quality brands than by low prices. Thus, the results of this survey, if followed, should light up the highway toward greater profits.



SERRANO
"We keep getting a gurgling sound on the telephone, Miss Rivers."

MAKE

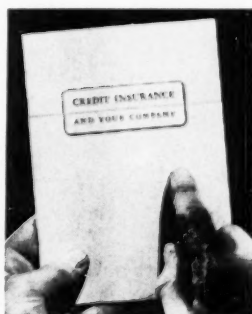
*Credit
Approved*

MEAN

*Payment
Guaranteed*

Credit losses represent
Capital and its earning
power **Gone Forever**

AN EVER INCREASING group of manufacturers, wholesalers and service organizations are transforming customers' PROMISES to pay into a GUARANTEE that they will be paid.



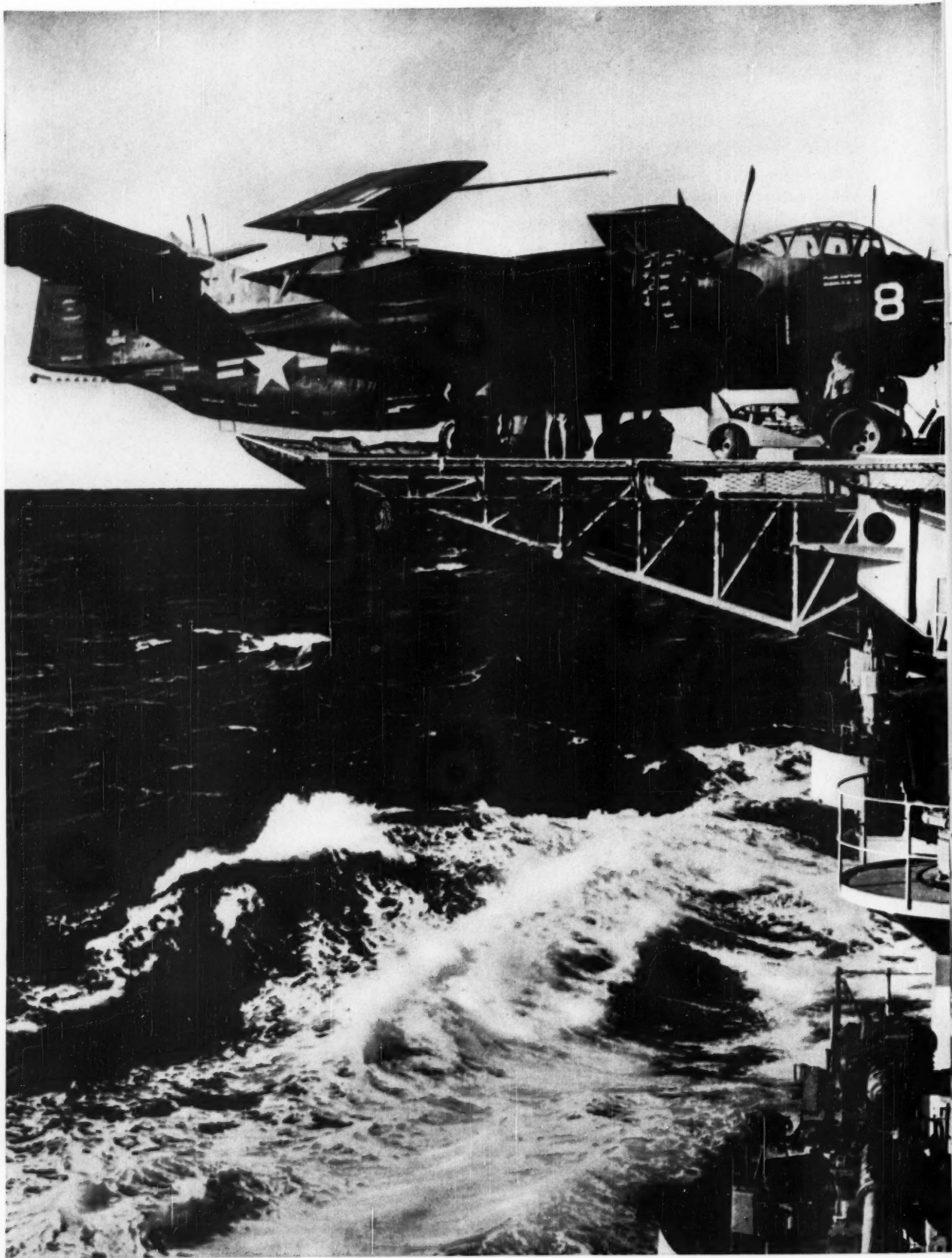
NEW BOOK tells 12 important ways **AMERICAN CREDIT INSURANCE** contributes to sound business management. We'd like to mail you a copy. Phone our office in your city or write American Credit Indemnity Company of New York, First National Bank Building, Baltimore 2, Md. Just say, "Send me book offered in *Dun's Review*."

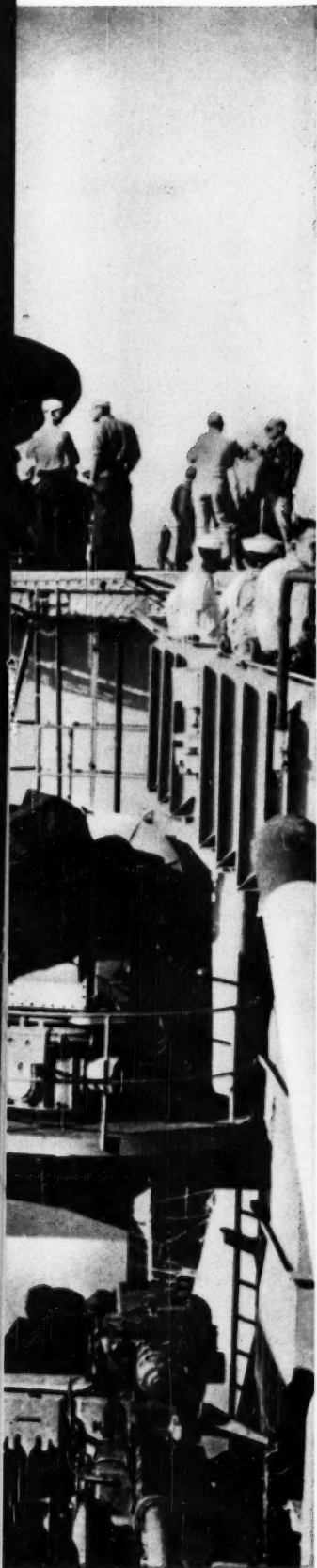
Credit Insurance is a Credit Tool . . . it is
NEVER a substitute for a Credit Department.

Protect your **CAPITAL** . . . Insure your **RECEIVABLES**



American Credit Insurance





Going Up!

Please Face The Ocean

Westinghouse deck-edge elevators helped put added sting in Uncle Sam's mighty World War II aircraft carriers. Designed and engineered by Westinghouse, these mammoth platforms moved combat planes between hangar and flight decks—in pounding seas and under enemy fire.

Today, as a result of this advance engineering, Westinghouse has been chosen to build *both* the deck-edge and inboard elevators for the new carrier, U. S. S. Forrestal. These new elevators will be able to move planes that help make this the most powerful carrier in the world.

Your elevator problem may not be this complex. But this same elevator-engineering can be applied to *any* vertical-traffic problem in any multi-floor building. We design, manufacture, install and maintain elevator equipment to help you move more people or products faster, at lowest investment and operating costs.

Whether you're modernizing or planning new building construction, our engineers can help you plan now for cost-cutting elevator equipment.

Westinghouse Elevators

PASSENGER AND FREIGHT ELEVATORS • ELECTRIC STAIRWAYS
PROTECTIVE MAINTENANCE AND SERVICE

YOU CAN BE SURE...IF IT'S **Westinghouse**

J-98658

THE TREND OF BUSINESS



NEW YORK HARBOR AT SUNSET—GENDREAU PHOTOGRAPH

PRODUCTION
PRICES
TRADE
FINANCE. . .

Factory output reflected an unusually high level of industrial activity. While employment dipped seasonally, the jobless were 5 per cent fewer than a year ago. High consumer spending encouraged an expansion in wholesale orders. Spot commodity prices declined further; stock prices dipped as investors anticipated their March taxes.

AN EXPANDED steel industry could be thanked for the assurance that there would be enough steel left after military buying so that plenty of cars and refrigerators could be built. With steel production continuing to run at about 2.2 million tons a week in January and early February, the National Production Authority took another look at its program and boosted the allotments of carbon steel for consumer durable goods for the second quarter of 1953 to 90 per cent of the pre-Korean base, compared with the originally planned 70 per cent. While there was no corresponding expansion in copper allotments, aluminum allotments were raised from 55 to 60 per cent of the pre-Korean base.

Reflecting largely the increased availability of steel, automobile output in January rose 11 per cent above the December level, was a notable 60 per cent

above a year ago. The production of consumer durables was about 40 per cent above a year ago.

With production at a high level in most other lines, too, the use of electric power in January and early February was sustained about at the December record, some 7 per cent above that in the early months of 1952.

Contrasting with a 5 per cent rise in the output of crude oil, almost 20 per cent less coal was mined in January than a year ago. Coal stocks remained large.

Industrial Production

Seasonally Adjusted Index: 1933-1934=100; Federal Reserve Board

	1950	1951	1952	1953
January	181	221	221	216†
February	180	221	221	
March	187	222	221	
April	190	222	216	
May	195	221	211	
June	190	221	201	
July	190	212	193	
August	209	217	214	
September	211	219	216	
October	216	218	219	
November	215	219	211	
December	218	218	215	


† Approximation; figure from quoted source not available.

Possibly because of an increase in construction, lumber output in January was 14 per cent above a year ago and the production of other building materials was maintained at an advanced rate.

The dollar volume of new construction in January, at \$2.3 billion, was 6 per cent above a year ago, although physical volume was about the same, reflecting higher costs. Compared with December, January construction volume was down seasonally by about 8 per cent.

Housing starts in December were slightly above the seasonally adjusted annual rate of 1.2 million which, if sustained for three consecutive months, would permit the reinstatement of housing credit controls.

The output of paperboard rose about 1 per cent in January and was well above the year-ago level. Papermill



liquid diet
for a
**GROWING
AMERICA**

Photo courtesy Marlow Pumps, Ridgewood, New Jersey

nearly 25% more water with Chrysler Industrial Power

Too seldom does Mother Nature supply moisture in the right proportion for maximum realization of the good things of the soil. This problem is not confined to the so-called "dry" or "arid" regions of the country. For instance, here's a field of beans in upper New York State. This farmer, like many other farmers and growers, has found that a sprinkler system fed by a Chrysler-powered pump provides the supplemental irrigation necessary for best growth.

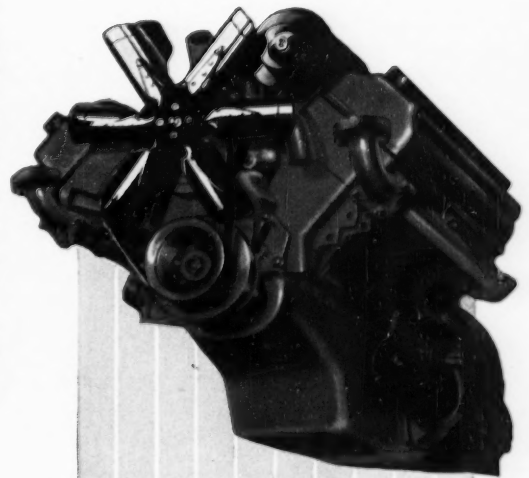
The Marlow Pump in use here is designed for high capacity pumping. For that reason, the powerful new 180 horsepower, 331 cubic inch displacement Model 20 Chrysler V-8 Industrial Engine was selected to power it. Result: nearly twenty-five percent more water than delivered by pumps powered by engines of similar weight and

displacement, *without* sacrificing fuel economy.

This is another fine example of how Chrysler meets the many and varied requirements for industrial power. For instance, Chrysler can equip any of its engines with a corrosion-resistant or fungus-treated electrical system; propane or natural gas burning carburetor; 3, 4 or 5 speed transmission; standard or glycol Fluid Drive.

Chrysler Industrial Power is not expensive. Production-line methods adapted to specialized industrial engine building provide a custom-built engine at mass-production prices.

For your power needs, see a Chrysler Industrial Engine dealer or write us direct: **Department 33, Industrial Engine Division, Chrysler Corporation, Trenton, Michigan.**



CHRYSLER

Industrial Engines

HORSEPOWER



WITH A PEDIGREE

Compass Points OF BUSINESS

	Year	Oct.	Nov.	Dec.	Year	Jan.
Employment, Civilian	1950	61.8	61.3	60.3	1951	59.0
Million persons	1951	61.8	61.3	61.0	1952	59.7
	1952	61.9	62.2	61.5	1953	60.5
Unemployment	1950	1.9	2.2	2.2	1951	2.5
Million persons	1951	1.6	1.8	1.7	1952	2.1
	1952	1.3	1.4	1.4	1953	1.9
Farm Income	1950	3.6	3.4	2.8	1951	2.5
Billion dollars	1951	4.2	3.7	3.0	1952	2.6
	1952	4.1	3.5	3.1	1953	...
Consumers' Credit Outstanding	1950	19.4	19.4	20.1	1951	19.9
Billion dollars	1951	19.6	20.0	20.6	1952	20.1
	1952	22.3	22.8	24.0	1953	...
Gross Hourly Earnings of Industrial Workers	1950	1.50	1.51	1.54	1951	1.56
Dollars	1951	1.62	1.63	1.64	1952	1.64
	1952	1.71	1.72	1.73	1953	...
Weekly Earnings of Industrial Workers	1950	61.99	62.23	63.88	1951	63.76
Dollars	1951	65.41	65.85	67.40	1952	66.91
	1952	70.80	70.66	72.36	1953	...
Manufacturers' Sales*	1950	21.0	20.8	21.4	1951	23.0
Billion dollars	1951	22.7	22.4	21.0	1952	22.6
	1952	24.7	23.5	24.8	1953	...
Manufacturers' Inventories*	1950	31.8	33.1	34.1	1951	35.0
Billion dollars	1951	42.4	42.7	43.0	1952	43.1
	1952	43.4	43.5	43.4	1953	...
Wholesalers' Sales*	1950	8.5	8.4	8.8	1951	9.8
Billion dollars	1951	9.2	9.0	8.8	1952	9.0
	1952	9.4	8.8	9.4	1953	...
Wholesalers' Inventories*	1950	9.1	9.3	9.7	1951	9.8
Billion dollars	1951	10.4	10.4	10.3	1952	10.2
	1952	10.1	10.2	10.2	1953	...
Retailers' Sales*	1950	12.0	11.8	12.6	1951	14.0
Billion dollars	1951	13.2	13.2	13.1	1952	13.2
	1952	14.2	14.0	14.3	1953	...
Retailers' Inventories*	1950	18.1	18.4	19.1	1951	20.2
Billion dollars	1951	20.8	20.8	20.8	1952	20.7
	1952	20.7	21.0	21.0	1953	...
Physical Production Index*	1950	216	215	218	1951	221
1935-1939=100	1951	220	219	218	1952	221
	1952	226	227	234	1953	236
Freight Carloadings	1950	3.5	3.2	3.6	1951	3.0
Millions of Cars	1951	3.5	3.2	3.5	1952	2.8
	1952	3.3	4.0	2.7	1953	3.4
Building Permits, 120 Cities	1950	421	338	342	1951	366
Million dollars	1951	296	237	201	1952	198
	1952	343	272	268	1953	236
Commercial and Industrial Failures	1950	707	683	679	1951	775
Number	1951	644	587	612	1952	671
	1952	631	590	583	1953	647
Liabilities of Failures	1950	16.6	18.9	21.0	1951	21.7
Million dollars	1951	30.4	17.6	19.4	1952	16.0
	1952	35.0	18.8	23.4	1953	23.3

* Adjusted for seasonal changes.

These figures bring up to date some of the series in "The Compass Points of Business" quarterly supplement to the February DUN'S REVIEW. The next quarterly supplement will appear in May.

THE TREND OF BUSINESS

operations were scheduled close to 94 per cent of capacity in January, slightly above the previous months level, but slightly below that in the previous year. Freight carloadings in January were about 26 per cent above a month ago and 21 per cent above a year ago.

Employment While Spring planting preparations were made by farmers in some parts of the country in February, the weather in most areas was too severe, or the ground too wet, for ploughing. With farm work concentrated largely on routine chores, agricultural employment was at a Winter low.

Much of the reduction in nonagricultural employment in January took place in trade and related activities as temporary workers left their holiday jobs. Total employment in January dipped 2 per cent to 60.5 million persons; this was 1 per cent above a year ago. Unemployment, up slightly to 1.9 million persons, was 5 per cent below a year ago.

The usual Winter curtailment in construction and other outdoor activities contributed to the increase in unemployment. Inventory-taking in some industries in early January necessitated some layoffs. Seasonal slackness in the textile, apparel, and tobacco industries was largely offset by increased activity in durable goods manufacturing.

Income Farm income dipped slightly in January, reflecting the lower prices for agricultural products as well as a somewhat reduced volume of crop meetings. Wage and salary disbursements, which usually account for about two-thirds of personal income remained stable.

Total personal income in December 1952 was at a record annual rate of \$279.2 billion, some 6 per cent above the corresponding 1951 total. For 1952 as a whole, personal income was at an unprecedented \$268.4 billion, 6 per cent above a year ago.

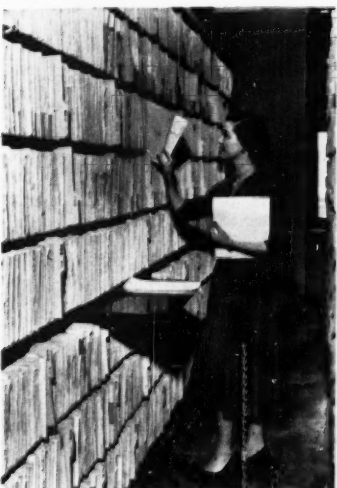
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DUN'S REVIEW

52

MARCH 1953

THE TREND OF BUSINESS

found about \$2 more in their weekly pay envelopes in December than in November, and about \$5 more than in December 1951. The rise was more pronounced in the durable goods industries than in nondurables manufacturing.

The number of hours worked increased slightly both in comparison with a month and a year ago. While hourly earnings increased in all of the nondurable goods industries, they declined slightly in one sector of durable goods manufacturing, namely, lumber and wood products, except furniture.

Prices The grain markets were irregular and unsettled through most of January and early February. Some buying of wheat for export occurred in early February, with a sustaining effect on the prices of that cereal. The lack of subsoil moisture in the Southwest did not augur well for the Winter wheat crop.

Heavy marketings of corn, coupled with a reduction in the feeding ratio and lagging foreign interest continued to depress corn prices. Livestock prices weakened noticeably.

The prices for textiles fluctuated mildly. With some support from Government and export buying, cotton prices inched upward in early February; there was a moderate pickup in the cotton gray goods markets. Wool trading remained somewhat slow without much change in price levels.

The DUN & BRADSTREET Daily Wholesale Commodity Price Index, was 277.17 (1930-1932=100) on February 13; this was fractionally below a month and and 9 per cent below a year ago.

Retail food prices in early January

Employment				
Millions of Persons: U. S. Bureau of the Census				
	1950	1951	1952	1953
January	56.9	59.0	59.7	60.5
February	57.0	58.9	59.8	
March	57.6	60.2	59.7	
April	58.7	60.0	60.1	
May	59.7	61.2	61.2	
June	61.5	61.8	61.6	
July	61.1	60.5	61.1	
August	61.4	62.6	62.4	
September	61.2	61.6	62.3	
October	61.8	61.8	61.9	
November	61.3	61.3	61.2	
December	60.3	61.0	61.5	

Includes all civilian workers.



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THE TREND OF BUSINESS

were almost unchanged from the December level. Higher retail prices for fresh and canned fruits and vegetables, eggs, and fish were largely offset by declines in the prices for meats, poultry, and some other foods.

The Bureau of Labor Statistics' recently revised Consumer's Price Index dipped slightly in December to 114.1 per cent of the 1947-1949 average level; this was about 1 per cent above a year ago. While rents rose further, some food prices declined.

Trade Stimulated by attractive promotions, as well as easy credit terms and late shopping hours, consumers were encouraged to increase their buying in January and early February. Although retail volume was considerably below the holiday peak in

Retail Sales

Billions of Dollars; U. S. Department of Commerce

	1950	1951	1952	1953
January	9.7	12.6	11.8	42.4†
February	9.5	11.7	11.2	
March	11.1	15.4	12.7	
April	11.4	12.5	13.4	
May	11.9	15.1		
June	12.1			
July	12.6		15.4	
August	12.8	11.1	13.4	
September	12.8	11.1	13.6	
October	13.4	15.0	14.8	
November	13.9	15.4	14.0	
December	14.8	15.4	16.8	

† Approximation, figure from quoted source not available.

December, it was estimated at from 1 to 5 per cent above a year ago.

The response to early promotions of Spring clothing was favorable in the southern sections of the country. Although seasonal weather in the northern sections spurred the buying of some specialties, the interest in Winter apparel generally lagged.

Volume in household goods remained above the year-ago comparative, although in most lines it did not exceed the scare-buying peak reached two years ago. Television, freezers, and decorating materials sold well. Floor coverings attracted favorable attention.

Encouraged by the weekly advertisements of the chain stores and the large independent supermarkets stressing sharp reductions in meat prices, housewives stocked their larders with large beef cuts and other fresh meats.

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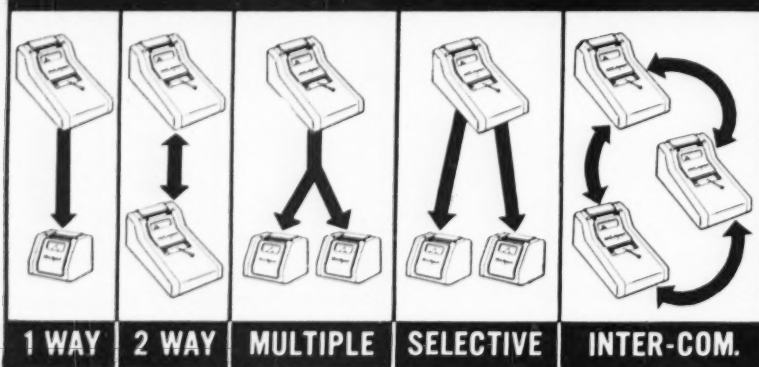
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THE TREND OF BUSINESS

Installment accounts outstanding at department stores rose 10 per cent above the previous month's level in December, compared with an increase of 8 per cent in the comparable period in 1951. Department stores reported that the volume of installment accounts outstanding at the end of 1952 was 18 per cent above the previous year's level.

A seasonal rise in the use of department store charge accounts in December boosted the volume outstanding by 33 per cent. The ratio of charge account collections to the balances outstanding was 48 per cent, 3 points higher than in December 1951.

The largest gain in department store sales in December, however, was the proportion paid for in cash; this constituted nearly one-half of total sales, was up 63 per cent from a month ago.

The total volume of consumer credit outstanding reached another new record in December. At \$24.0 billion,

Wholesale Commodity Prices

Index: 1947-1949=100; U. S. Bureau of Labor Statistics

	1950	1951	1952	1953
January	97.7	115.0	111.0	109.58
February	98.1	116.5	112.5	
March	98.5	116.5	112.3	
April	98.5	116.5	111.8	
May	99.6	115.9	111.9	
June	100.2	115.1	111.2	
July	101.9	114.2	111.8	
August	102.2	113.7	112.2	
September	107.1	113.4	111.7	
October	107.7	113.7	111.1	
November	109.3	113.6	110.7	
December	112.1	113.5	109.6	

† Approximation; figure from quoted source not available.

BANK CLEARINGS—INDIVIDUAL CITIES (Thousands of dollars)

	January		% Change
	1953	1952	
Boston	2,507,496	2,664,197	- 5.9
Philadelphia	4,612,000	4,666,000	- 7.1
Buffalo	510,973	498,431	+ 2.5
Pittsburgh	1,678,799	1,685,123	- 0.4
Cleveland	1,987,636	1,956,020	+ 1.6
Cincinnati	1,046,135	975,499	+ 7.2
Baltimore	1,257,175	1,194,954	+ 5.2
Richmond	762,999	705,761	+ 8.4
Atlanta	1,378,300	1,388,900	- 0.8
New Orleans	739,066	727,368	+ 1.6
Memphis	541,520	543,472	- 0.4
Chicago	4,027,155	3,840,146	+ 4.9
Detroit	2,759,779	2,350,000	+17.4
St. Louis	1,424,881	1,402,429	+ 1.6
Louisville	779,730	706,075	+ 9.2
Minneapolis	1,338,684	1,123,962	+ 1.1
Kansas City	1,501,868	1,618,344	- 1.6
Omaha	688,931	702,112	- 1.9
Denver	593,547	589,861	+ 0.6
Dallas	1,672,146	1,557,594	+ 7.4
Houston	1,466,547	1,312,387	+11.7
San Francisco	2,217,994	2,277,546	- 2.6
Portland, Ore.	744,632	698,762	+ 6.6
Seattle	678,666	793,797	- 1.6
Total 24 Cities	36,997,586	36,385,700	+ 1.7
New York	39,081,827	39,160,153	- 0.2
Total 25 Cities	76,079,413	75,545,853	+ 0.7
Average Daily	2,926,131	2,995,610	+ 0.7

THE TREND OF BUSINESS

it was 5 per cent above a month ago, 17 per cent above a year ago.

Wholesale volume was sustained at a high level in January and early February. Orders for apparel expanded markedly with volume in men's clothing appreciably above the year-ago comparative. While household goods sold better than a year ago, they were somewhat less frequently purchased than two years ago when there was a wave of scare-buying.

The dollar volume of wholesale trade in December was estimated at \$9.8 billion, some 5 per cent above the year-ago comparative. Wholesaler's inventories were valued at \$10.0 billion, about 2 per cent below a year ago.

Barometers Consumer spending was 3 per cent above a year ago in January, according to the DUN'S REVIEW Regional Trade Barometer (preliminary). After adjustment for seasonal variations and for the number of business days in the month, the barometer stood at 337.5 per cent of the average level prevailing in the years 1935-1939.

That consumer spending was 6 per

Consumers' Price Index
Index: 1947-1949=100; U. S. Bureau of Labor Statistics

	1950	1951	1952	1953
January	100.6	108.6	113.1	114.0†
February	100.4	109.9	112.4	
March	100.2	110.3	112.4	
April	100.8	110.4	112.0	
May	101.1	110.9	111.9	
June	101.8	110.8	111.4	
July	101.1	110.9	111.1	
August	101.7	110.9	111.3	
September	101.4	111.6	111.1	
October	101.9	112.1	111.2	
November	101.5	112.8	111.3	
December	101.9	113.1	111.1	

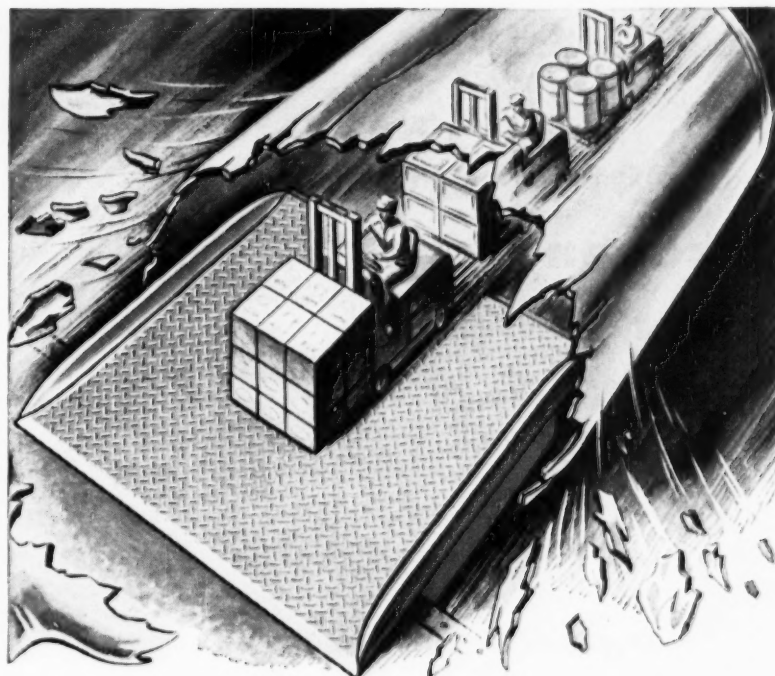
† Approximation; figure from quoted source not available.

WHOLESALE FOOD PRICE INDEX
The index is the sum total of the price per pound of 31 foods in general use. It is not a cost-of-living index.

Latest Weeks		Year Ago	1953
Feb. 17... \$6.20	Feb. 19... \$6.60	High Jan. 15... \$6.25	
Feb. 10... 6.19	Feb. 12... 6.57	Low Feb. 3... 6.13	
Feb. 3... 6.13	Feb. 5... 6.61	1952	
Jan. 27... 6.22	Jan. 29... 6.61	High Aug. 25... \$6.70	
Jan. 20... 6.25	Jan. 22... 6.60	Low Dec. 16... 6.11	

DAILY WHOLESALE PRICE INDEX
The index is prepared on the basis of daily spot closing prices of 30 primary commodities (1930-1932=100).

Week Ended	Mon.	Tues.	Wed.	Thurs.	Fri.
Feb. 13.....	276.43	276.55	276.28	Holiday	277.17
Feb. 6.....	279.07	278.53	278.81	279.20	278.36
Jan. 30.....	279.09	279.32	279.59	279.11	279.02
Jan. 23.....	279.61	279.38	279.40	279.18	279.44
Jan. 16.....	278.54	278.24	279.38	279.48	279.10



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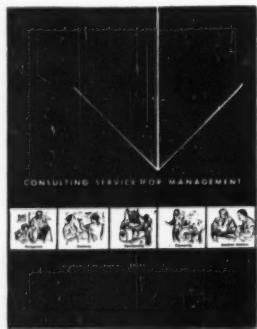
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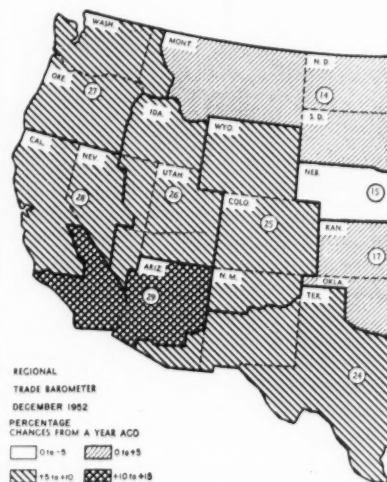
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THE TREND OF BUSINESS

BAROMETERS



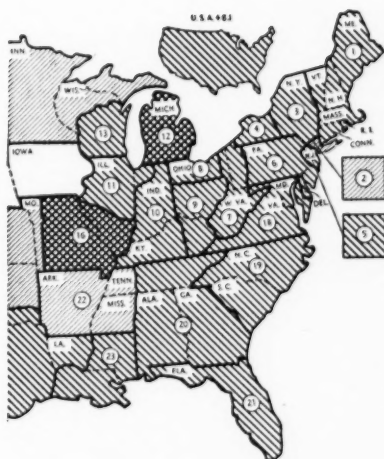
REGION:	(% Change from)		
	Dec. 1952	Dec. 1951	Nov. 1952
United States.....	327.7	+ 6.1	- 6.8
1. New England.....	254.2	+ 5.1	+ 1.8
2. New York City.....	254.6	+ 1.8	+ 1.1
3. Albany, Utica, and Syracuse.....	344.0	+ 5.2	- 0.3
4. Buffalo and Rochester.....	328.5	+ 8.2	- 2.2
5. Northern New Jersey.....	261.5	+ 5.5	- 0.5
6. Philadelphia.....	293.9	+ 8.0	- 7.4
7. Pittsburgh.....	305.6	+ 5.8	- 13.2
8. Cleveland.....	358.9	+ 9.5	- 12.5
9. Cincinnati and Columbus.....	360.0	+ 8.5	+ 1.2
10. Indianapolis and Louisville.....	407.9	+ 7.9	- 1.1
11. Chicago.....	295.4	+ 9.8	+ 2.2
12. Detroit.....	357.9	+ 14.8	- 4.2
13. Milwaukee.....	354.0	+ 8.1	- 4.4
14. Minneapolis and St. Paul.....	326.4	+ 0.6	- 5.8

cent above a year ago was reflected in the United States barometer for December. The only region to have a decline in retail volume from a year ago was the Iowa and Nebraska Region (15); the decrease amounted to less than 1 per cent.

The December barometers reflected increases in consumer spending from a year ago ranging from less than 1 per cent in the Minneapolis and St. Paul Region (14) to a rise of 14.8 per cent in the Detroit Region (12). The second-smallest increase from a year ago was reflected in the barometer for the New York City Region (2), while the second-largest increase occurred in the Los Angeles Region (29).

After discounting the effects of the usual holiday upsurge in retail volume, the December barometer for the United States fell almost 7 per cent below that

..... FOR 29 REGIONS



REGION:	Dec. 1952	(% Change from) Dec. 1951	Nov. 1952
15. Iowa and Nebraska.....	329.1	- 0.6	-10.8
16. St. Louis.....	322.4	+10.4	+ 1.2
17. Kansas City.....	303.0	+ 3.7	- 7.7
18. Maryland and Virginia.....	344.0	+ 5.8	- 2.0
19. North and South Carolina.....	362.8	+ 7.8	-11.4
20. Atlanta and Birmingham.....	427.8	+ 7.8	-11.4
21. Florida.....	465.9	+ 6.7	+ 1.1
22. Memphis.....	372.7	+ 4.9	+ 3.4
23. New Orleans.....	437.2	+ 6.6	+ 0.1
24. Texas.....	492.9	+ 6.9	+ 2.5
25. Denver.....	374.8	+ 5.0	+ 3.3
26. Salt Lake City.....	380.7	+ 5.8	- 2.8
27. Portland and Seattle.....	393.2	+ 5.5	- 4.2
28. San Francisco.....	353.5	+ 6.3	- 2.0
29. Los Angeles.....	365.9	+12.8	- 3.4

for November. Decreases from November were apparent in 19 of the regions.

Finance Following a seasonal pattern which has been evident in the post-World War II years, stock prices reacted to the approach of the March 15 income tax date. Stock prices declined, as they have in the first quarters of other years, in response to the selling of securities to

Geographical Divisions:	January 1953	1952	% Change
New England.....	\$ 14,599,976	\$ 16,600,425	- 12.1
Middle Atlantic.....	49,497,805	44,485,128	+ 11.3
South Atlantic.....	35,214,438	28,998,528	+ 21.4
East Central.....	46,688,776	46,156,306	+ 1.2
South Central.....	69,480,585	55,170,459	+ 25.0
West Central.....	13,826,189	13,764,535	+ 0.4
Mountain.....	9,579,475	10,732,864	- 10.7
Pacific.....	67,584,064	43,384,750	+ 55.8
Total U. S.....	\$306,168,308	\$259,293,065	+ 18.2
New York City.....	\$28,766,075	\$24,712,689	+ 16.4
Outside N. Y. City..	\$277,203,233	\$234,580,376	+ 18.4

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DUN'S REVIEW

58

MARCH · 1953

raise the cash needed for the heavy income tax payments.

The average prices for the industrial and railroad shares closed at new lows for 1953 in the early part of February. The Dow-Jones average of 30 industrial stock prices reached a high of 293.79 on January 5, closed at 282.85 a month later.

Dividends paid on common shares listed on the New York Stock Exchange in 1952 rose almost 2 per cent from the 1951 level to a record \$5.6 billion. This compares with the previous record of \$5.5 billion paid on common shares in 1950.

Industrial Stock Prices

Monthly Average of Daily Index: Dow Jones

	1950	1951	1952	1953
January	190.79	244.45	274.71	288.44
February	204.46	253.12	265.19	
March	206.39	249.59	264.48	
April	212.67	253.36	262.55	
May	219.36	254.36	261.61	
June	221.02	249.12	262.81	
July	205.19	260.01	276.01	
August	216.60	264.92	276.79	
September	221.12	273.36	272.49	
October	229.12	269.73	267.77	
November	229.18	259.64	276.36	
December	229.26	266.09	285.95	

Based on closing prices of 30 industrial stocks.

NEW BUSINESS INCORPORATIONS

Geographical Regions:	Dec. 1952	Dec. 1951	12 Months 1952	1951
New England.....	813	617	6,130	5,589
Middle Atlantic.....	2,678	2,122	31,655	28,623
East North Central.....	1,349	1,164	14,760	13,865
West North Central.....	435	423	4,399	4,222
South Atlantic.....	1,205	985	13,501	12,197
East South Central.....	230	187	2,714	2,304
West South Central.....	490	493	5,664	4,984
Mountain.....	312	249	3,591	3,239
Pacific Coast.....	782	763	10,054	8,627
United States.....	8,213	6,913	92,758	83,640

Weekly Business Signposts

SELECTED BUSINESS INDICATORS	LATEST WEEK*	PREVIOUS WEEK	YEAR AGO
Steel Ingot Production Ten Thousand Tons	225	225	210
Bituminous Coal Mined Hundred Thousand Tons	85	89	106
Automobile Production Thousand Cars and Trucks	140	138	106
Electric Power Output Ten Million K.W. Hours	813	815	746
Freight Carloadings Thousand Cars	691	698	734
Department Store Sales Index Number (1947-1949=100)	88	86	87
Wholesale Prices Index Number (1947-1949=100)	109	109	112
Bank Debits Hundred Million Dollars	314	287	291
Money in Circulation Hundred Million Dollars	298	297	284
Business Failures Number of Failures	200	159	125

*Steel, automobile, price and failures data are for the third week of February; all other figures are for the second week.
Sources: Amer. Iron & Steel Inst.; U. S. Bureau of Mines; Automotive News; Edison Electric Inst.; Amer. Assoc. of Railroads; U. S. Bureau of Labor Statistics; DUN & BRADSTREET, INC.

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RESEARCH

(Continued from page 28)

research objectives clearly understood and on the record?

When satisfactory answers to these questions have been found, the research manager proceeds to schedule the work, fix responsibility, and fit the project in with the over-all program. It is no fixed, formal operation; frequently the organization must be adjusted to the individual, not the other way around.

The danger of confusing the discipline of strictly administrative procedures with the discipline of science is a real one, and the research administrator steers a careful course between them. Management must manage, but creative minds must work in an atmosphere of freedom.

Good communication is essential to good research. Such devices as standing committees which meet at stated intervals, periodic written reports, informal conferences, and the judicious use of staff services—information circulation by a technical librarian, for example—are all needed. Unless the researcher is told what is wanted, is given scientific assistance outside his own field when he needs it, and is made to understand how his work fits into the entire project, his efficiency is reduced.

Armour Research Foundation handles a typical project in a manner similar to most other research institutes. The sponsor, an industrial executive, for example, discusses his problem with the organization. If the project does not conflict with programs in progress, is one which the Foundation can handle effectively, and is judged to be both in the public and company interest, a proposal is prepared, outlining the approach to the problem, the staff and equipment available, and including a time-and-cost estimate for the project.

The sponsor and the Foundation then enter into a standard contract which, among other things, provides for confidential handling of findings and assignment of patent rights resulting from the project. Appropriate staff members are assigned to the project, and the sponsor receives periodic progress reports. He also helps guide the project.

Internally, the Foundation attacks a

problem through the co-ordinated efforts of various departments, each specializing in one type of applied science, such as metallurgy or chemical engineering. Projects are not compartmentalized, since few technical problems fall within one field of study. Instead, ideas are cross-fertilized among specialists through the "Armour Plan," a deliberate application of the adage, "Two heads are better than one." A ceramics expert, a physicist, and an electrical engineer may collaborate on one project, for example.

Program Balance

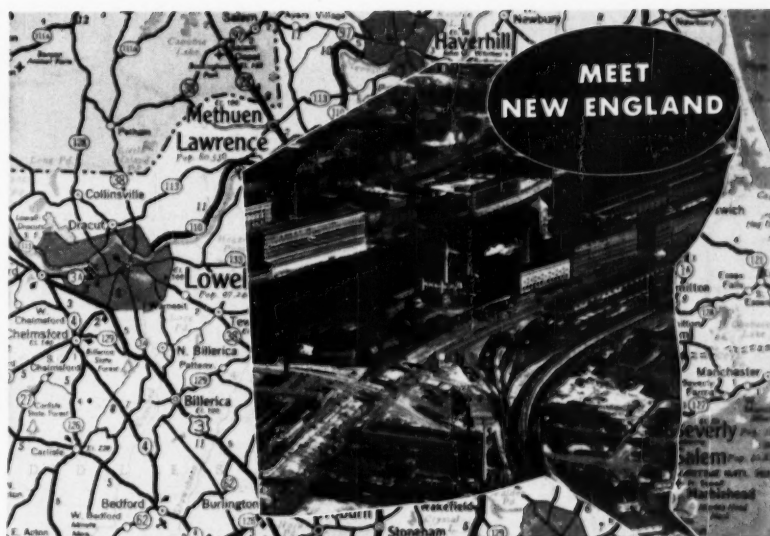
Research, of course, is expensive, especially if it is of the applied type; and development, if it requires pilot plants, costs even more. Results can't be ground out as on a sausage machine; research requires a gestation period before results appear. But the men who play out the hand are the ones who win the big prizes.

Assigning twice as many men to a project is no assurance the work will go twice as fast. An industrialist who invests \$10,000 in a ten-month program in order to improve his product, say, 10 per cent, and who expects a 1 per cent improvement after one month, misunderstands the nature of research. Results can neither be scheduled nor predicted.

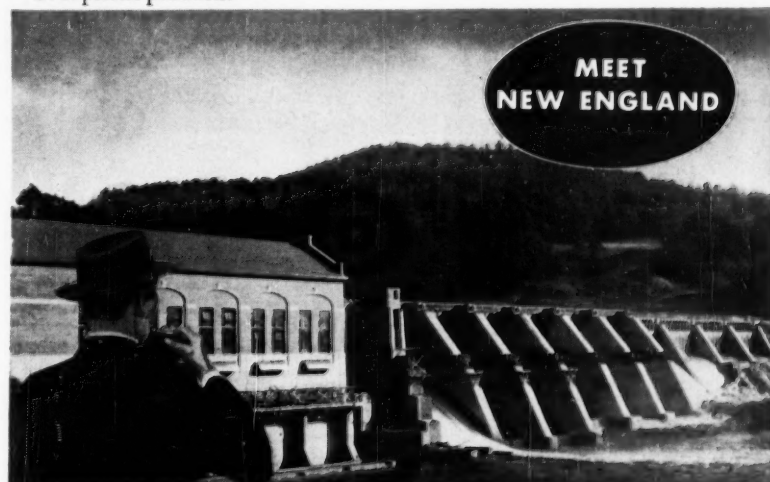
To the uninitiated, the early stages of a project, involving perhaps a literature and patent search and a careful analysis of the problem, may seem unnecessary and unfruitful. But these



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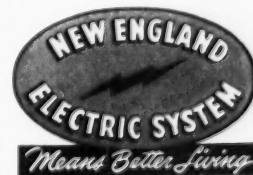


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steps are usually essential and aid materially in working out an effective solution to the problem.

Another principle of research management is to maintain a balanced portfolio of projects; some of them are of the long-term speculative type while others are short-term programs with a better chance of success. This is in the tradition of good investment, and it has the added advantage of giving researchers a variety of problems to study.

Outside Laboratories

When outside projects are carefully integrated with a company's entire program, the practise of assigning certain research to outside laboratories has proved profitable and practical. The non-profit industrial institutes have earned recognition and have grown because they fill an economic need; they allow a business man to avoid putting all his research eggs in one basket.

Here are some of the reasons, including economic ones, for utilizing outside research facilities:

1. Highly trained scientific specialists are available to extend a company's research program into broader and more complex areas.
2. It is economical to "rent" expensive equipment not in a company's laboratory for limited periods on selected projects.
3. Technical manpower problems are solved. No hiring for peak periods is



MONKMEYER PHOTOGRAPH

required, and the company's present research staff is released for other work.

4. Contractual control assures the sponsor that specific procedures in such areas as reporting of results, keeping information confidential (if so desired), and expenditure of project appropriations will be observed.

5. Isolation from short-term production problems enables researchers to concentrate their full attention on a

project and to reach solutions more rapidly.

6. Technological problems are considered from a fresh viewpoint. Suggestions for new approaches and cross-fertilization of ideas frequently point the way to a more effective program.

7. Experience in handling a wide variety of projects gives the typical outside research laboratory administrative flexibility. It is ready to adjust its operations to large or small projects, advising sponsors on how the organization can serve them best.

Past Success

8. Objectivity is characteristic of outside research organizations. The value of disinterested information, independently arrived at, is well recognized.

9. Continuing relationships with outside research laboratories, usually on basic, long-term projects, have been found effective by many companies. Most independent research organizations can point to concerns which have been employing their services for a number of years.

10. Because their reputations depend upon high-quality performance, independent laboratories are as much interested in successful results as are their sponsors. They will suggest terminating unpromising work, and will volunteer proposals for research which appears to have bright prospects. This mutual desire for success increases the chances for rich research dividends.

The management of research is a kind of pioneering; it is a relatively new profession, and the ground rules



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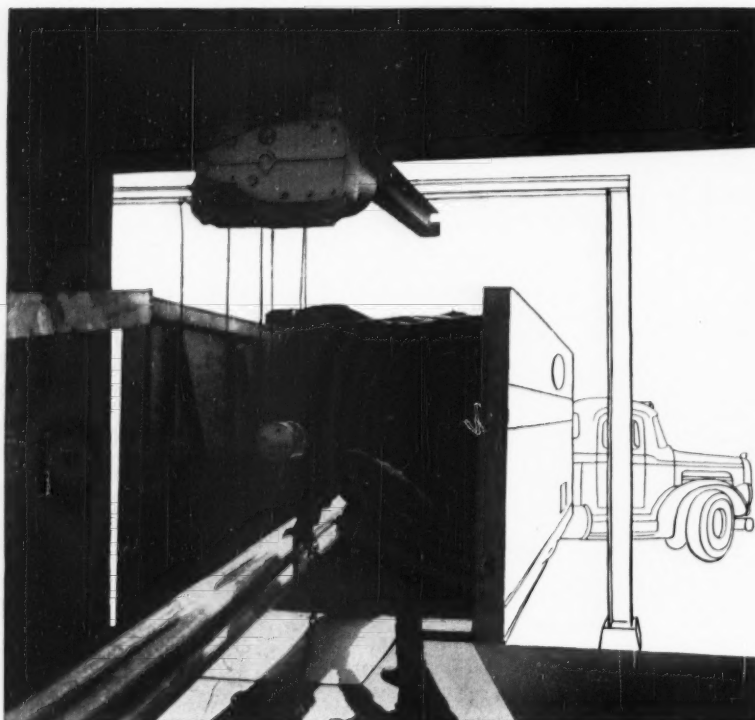
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are still being written. Managing sponsored projects in an independent laboratory may call for a bit more than the normal amount of flexibility and optimism, but it also requires the abilities and methods needed for effective research in any organization.

Better Administrators

Better research management will result in better research; and the nation's research administrators are now developing improved ways to handle research and use the talents of research workers. Their contributions will play no small



The AUTHOR

Dr. Haldon A. Leedy was graduated from North Central College and then attended the University of Illinois where he completed graduate work. He served as an assistant in the Physics Department of the University while earning his master's and his doctor's degrees.

Upon completion of his academic work, Dr. Leedy was named physicist with the Armour Research Foundation and later became the Chairman of Physics Research with the Foundation. He rose, in 1948, to his present position, Director of the Armour Research Foundation.

His professional activities are many and varied. He has served as a committee chairman with the American Society for Testing Materials, the American Standards Association, the Acoustical Society of America, and the National Electronics Conference. He is a past president of the Physics Club of Chicago, the Greater Chicago Noise Reduction Council, and the Midwestern Air Pollution Prevention Association, Inc.

Not only is Dr. Leedy a member of numerous scientific and civic groups, but he has also contributed a number of articles and papers in the field of science.

part in enabling us to maintain our defensive strength and improve our standard of living. With the increasing complexity of modern technological development, their talents will be even more in demand not only for research and administration, but for the very top administrative posts in industry.

The man who can plan a project, handle personnel and budget problems, explain his case clearly to top management, and push an operation to success, is a real asset; finding and developing such men is essential if research is to continue as a major force in the advancement of our way of life.

THE END



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DUN'S REVIEW

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Business Failures . . .

Rising 11 per cent in January to 647, business failures reached the highest level in seven months. Despite this upturn, casualties were 4 per cent lighter than in the comparable month a year ago. In fact, failures this January were the lowest for any January in four years; they compared with a post-war peak of 864 in the first month of 1950 and a pre-war toll of 1,237 in 1940.

The rate of failure, as reflected in DUN's FAILURE INDEX, dipped slightly to 26.4 casualties for every 10,000 busi-

nesses listed in the DUN & BRADSTREET *Reference Book*. This was below the rate of 26.6 in December and the 27.8 in January 1952. The FAILURE INDEX projects monthly failures to an annual rate and adjusts for seasonal fluctuations.

Although the number of concerns failing increased in January, their liabilities, at \$23,309,000, were almost unchanged from the preceding month's level. Casualties of all sizes under \$100,000 rose from December, with those involving losses of \$5,000 to \$25,000 reach-

WHY BUSINESSES FAIL

Compiled quarterly by GRIFFITH M. JONES
Assistant to the President, DUN & BRADSTREET, INC.

CLASSIFICATION OF CAUSES OF BUSINESS FAILURES IN U. S.—YEAR 1952

BASED ON OPINIONS OF INFORMED CREDITORS AND INFORMATION IN DUN & BRADSTREET'S CREDIT REPORTS

MFG.	WHOL.	RET.	CONST.	COM. SER.	TOTAL	UNDERLYING CAUSES		APPARENT CAUSES		MFG.	WHOL.	RET.	CONST.	COM. SER.	TOTAL	
4.2	5.7	5.7	4.4	3.3	5.1	NEGLECT:	Due to	Bad Habits	0.4	1.0	1.4	1.5	1.0	1.1		
								Poor Health	3.0	3.9	3.2	2.6	1.6	3.1		
								Marital Difficulties	0.4	0.7	0.5	0.1	0.5	0.5		
								Other	0.4	0.1	0.6	0.2	0.2	0.4		
3.8	6.9	3.4	2.7	4.3	3.8	FRAUD:	On the part of the Principals, reflected by	Misleading Name			0.1				0.1	
								False Financial Statement	0.4	0.9	0.6	0.5	0.7	0.5		
								Premeditated Overbuy	0.1	0.1	0.2	0.2		0.2		
								Irregular Disposal of Assets	3.0	5.0	2.0	1.8	2.9	2.6		
								Other	0.3	0.9	0.5	0.2	0.7	0.4		
9.8	7.4	14.2	7.2	7.5	11.3	LACK OF EXPERIENCE IN THE LINE	Evidenced by inability to avoid condi- tions which re- sulted in	Inadequate Sales	54.9	50.3	52.8	30.2	50.6	50.3		
9.0	9.8	13.3	14.5	12.6	12.1	LACK OF MANAGERIAL EXPERIENCE		Heavy Operating Expenses	8.5	5.9	5.3	25.5	10.1	8.7		
14.7	13.9	15.7	21.5	20.9	16.4	UNBALANCED EXPERI- ENCE*		Receivables Difficulties	8.9	14.0	4.2	11.7	4.1	7.0		
54.5	54.7	46.2	47.2	48.1	49.2	INCOMPETENCE		Inventory Difficulties	10.1	15.0	10.5	2.0	1.8	9.2		
								Excessive Fixed Assets	12.3	3.6	10.7	3.0	19.0	10.1		
								Poor Location	0.3	0.8	5.9	0.2	1.8	3.3		
								Competitive Weakness	12.4	14.2	16.3	20.3	12.3	15.4		
								Other	5.8	4.4	3.9	10.1	3.6	5.0		
2.2	1.3	0.7	0.4	2.0	1.1	DISASTER:	Some of these occurrences could have been provid- ed against through insur- ance	Fire	1.1	0.6	0.3		0.3	0.4		
								Flood	0.3	0.1	0.1		0.2	0.1		
								Burglary		0.1	0.1			0.1		
								Employees' Fraud	0.1	0.1	0.1	0.1	0.3	0.1		
								Strike	0.3	0.1	0.0		0.2	0.1		
								Other	0.4	0.3	0.1	0.3	1.0	0.3		
0.6		0.0	0.4		0.2	WAR MOBILIZATION:		Shortage of Manpower	0.1					0.0		
0.2	0.3	0.8	1.7	1.3	0.8	REASON UNKNOWN		Shortage of Material	0.5		0.0	0.4		0.2		
100.0	100.0	100.0	100.0	100.0	100.0	TOTAL	Because some failures are attributed to a combination of apparent causes, the totals of these columns exceed the totals of the corresponding columns on the left.								The figure 0.0 indicates a percentage less than 0.05.	
SUMMARY FIGURES																
1,581	748	3,833	838	611	7,611	NUMBER OF FAILURES		PER CENT OF TOTAL	20.8	9.8	50.4	11.0	8.0	100.0		
313,254	193,555	1,530,615	†	†	2,546,781	ESTIMATED NO. OF LISTED NAMES IN EACH GROUP†		FAILURES								
								PER CENT OF TOTAL	12.3	7.6	60.1	†	†	100.0		
								LISTED NAMES								
\$104,954	\$40,896	\$75,547	\$36,145	\$25,772	\$283,314	CURRENT LIABILITIES IN THOUSANDS		PER CENT OF TOTAL	37.0	14.4	26.7	12.8	9.1	100.0		
								CURRENT LIABILITIES								
\$66,385	\$54,674	\$19,710	\$43,132	\$42,180	\$37,224	AVERAGE LIABILITIES PER FAILURE		FAILURE RATE FOR EACH GROUP**	50.5	38.6	25.0	†	†	28.9		

* Experience not well rounded in sales, finance, purchasing, and production on the part of an individual in case of a proprietorship, or of two or more partners or officers constituting a management unit.

** Annual rate of failures per 10,000 listed names.

† The number of names in each group is an estimate, but the total number of names was obtained by an actual count of the names, excluding branches, listed in the Reference

Book at the end of 1952. The names in the Reference Book include only a limited percentage of the total service and construction enterprises; therefore, estimates of the number of names and failure rates for these are omitted.

VITAL STATISTICS OF INDUSTRY AND COMMERCE

Based upon Listings in the DUN & BRADSTREET REFERENCE BOOK

TOTAL NUMBER OF CONCERNS AND RELATED FAILURE STATISTICS

YEAR	REFERENCE BOOK NAMES LISTED* END OF YEAR	TOTAL NUMBER OF FAILURES	FAILURE RATE PER 10,000 LISTED NAMES	TOTAL CURRENT LIABILITIES	AVERAGE LIABILITIES PER FAILURE
1929	2,205,210	22,909	104	\$483,252,000	\$21,094
1930	2,453,191	26,355	122	668,282,000	25,357
1931	2,138,094	28,285	133	736,310,000	26,032
1932	2,010,713	31,822	154	928,313,000	29,172
1933	1,983,807	19,859	100	457,520,000	23,038
1934	1,991,446	12,091	61	333,959,000	27,621
1935	1,998,527	12,244	62	310,580,000	25,366
1936	2,045,275	9,607	48	203,173,000	21,148
1937	2,098,860	9,490	46	183,253,000	19,310
1938	2,117,962	12,836	61	246,505,000	19,204
1939	2,141,223	14,768	70	182,520,000	12,359
1940	2,078,682*	13,619	63	166,684,000	12,239
1941	2,090,163	11,848	55	136,104,000	11,488
1942	2,008,213	9,405	45	100,763,000	10,713
1943	1,871,876	3,221	16	45,339,000	14,076
1944	1,789,694	1,222	7	31,660,000	25,908
1945	1,888,356	809	4	30,225,000	37,361
1946	2,174,698	1,129	5	67,349,000	59,654
1947	2,371,305	3,474	14	204,612,000	58,898
1948	2,516,679	5,250	20	234,620,000	44,690
1949	2,574,977	9,246	34	308,109,000	33,323
1950	2,519,388	9,162	34	248,283,000	27,099
1951	2,493,314	8,058	31	259,547,000	32,210
1952	2,546,781	7,611	29	283,314,000	37,224

NOTES: The names in the *Reference Book* include only a limited percentage of all service and construction enterprises; therefore, comparative statistics on failures and concerns in business are not provided in these tables for construction and commercial service.

* *Reference Book* listings exclude branches from 1940 to date. Prior to 1940 no figures on branches were available; in 1940 they totalled 101,717.

** While the total number of names was obtained by an actual count, the number in each group is an estimate. The total number of names in each group for 1949 and 1950 have been revised.

YEAR	REFERENCE BOOK ESTIMATED NUMBER **	PER CENT OF TOTAL LISTED NAMES	NUMBER OF FAILURES	PER CENT OF TOTAL FAILURES	FAILURE RATE PER 10,000 LISTED NAMES	CURRENT LIABILITIES	PER CENT OF TOTAL CURRENT LIABILITIES	AVERAGE LIABILITIES PER FAILURE
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NUMBER OF MANUFACTURING CONCERNS AND RELATED FAILURE STATISTICS

1939	203,416	9.5	2,919	19.7	143.5	\$71,152,000	39.0	\$24,375
1940	201,632	9.7	2,455	18.0	121.8	66,799,000	40.1	27,209
1941	209,016	10.0	1,974	16.7	94.4	51,243,000	37.6	25,959
1942	208,854	10.4	1,505	16.0	72.1	31,200,000	31.0	20,731
1943	209,650	11.2	567	17.6	27.0	19,059,000	42.0	33,614
1944	200,446	11.2	352	28.8	17.6	20,172,000	63.7	37,307
1945	211,496	11.2	280	34.6	13.2	17,247,000	57.1	61,596
1946	250,090	11.5	466	41.3	18.6	38,887,000	57.7	83,448
1947	270,329	11.4	1,275	36.7	47.2	142,727,000	69.8	111,941
1948	281,868	11.2	1,481	28.2	52.5	130,292,000	55.5	87,976
1949	316,722	12.3	2,331	25.2	73.6	143,265,000	46.5	61,461
1950	309,885	12.3	2,074	22.6	66.9	95,094,000	38.3	45,851
1951	309,171	12.4	1,533	19.0	49.6	90,970,000	35.1	59,341
1952	313,254	12.3	1,581	20.8	50.5	104,954,000	37.0	66,385

NUMBER OF WHOLESALE CONCERNS AND RELATED FAILURE STATISTICS

1939	139,179	6.5	1,534	10.4	110.2	\$23,942,000	13.1	\$15,608
1940	145,508	7.0	1,316	9.7	90.4	20,405,000	12.2	15,505
1941	156,762	7.5	1,045	8.8	66.7	18,581,000	13.7	17,781
1942	150,616	7.5	760	8.1	50.5	11,682,000	11.6	15,371
1943	140,391	7.5	257	8.0	18.3	3,108,000	6.9	12,093
1944	137,806	7.7	94	7.7	6.8	1,700,000	5.4	18,085
1945	149,180	7.9	61	7.5	4.1	1,214,000	4.0	19,902
1946	176,151	8.1	99	8.8	5.6	1,480,000	17.1	115,960
1947	187,333	7.9	447	12.8	23.9	21,148,000	10.3	47,289
1948	203,851	8.1	669	12.7	32.8	26,066,000	11.1	38,963
1949	195,698	7.6	1,110	12.0	56.7	43,163,000	14.0	38,886
1950	186,435	7.4	1,016	11.1	54.5	33,594,000	13.5	33,065
1951	189,492	7.6	827	10.3	43.6	41,572,000	16.0	50,268
1952	193,555	7.6	748	9.8	38.6	40,896,000	14.4	54,674

NUMBER OF RETAILING CONCERNS AND RELATED FAILURE STATISTICS

1939	1,402,501	65.5	9,050	61.3	64.5	\$67,378,000	36.9	\$7,445
1940	1,361,537	65.5	8,495	62.4	62.4	58,115,000	34.9	6,841
1941	1,369,057	65.5	7,589	64.1	55.4	48,944,000	36.0	6,448
1942	1,303,330	64.9	5,889	62.6	45.2	40,421,000	40.1	6,864
1943	1,203,616	64.3	1,761	54.7	14.6	12,722,000	28.1	7,224
1944	1,140,035	63.7	493	40.4	4.3	3,924,000	12.4	7,959
1945	1,180,223	62.5	290	35.9	2.5	3,127,000	10.3	10,283
1946	1,320,042	60.7	304	26.9	2.3	6,273,000	9.3	20,635
1947	1,425,154	60.1	1,222	35.2	8.6	21,400,000	10.5	17,561
1948	1,497,424	59.5	2,185	41.6	14.6	39,819,000	17.0	18,234
1949	1,611,936	62.6	4,246	45.9	26.3	71,273,000	23.1	16,786
1950	1,544,385	61.3	4,429	48.3	28.7	72,691,000	29.3	16,313
1951	1,528,401	61.3	4,088	50.7	26.7	72,936,000	28.1	17,841
1952	1,530,615	60.1	3,833	50.4	25.0	75,547,000	26.7	19,710



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THE FAILURE RECORD

	Jan. 1953	Dec. 1952	Jan. P.C. 1953 Chg.†
DUN'S FAILURE INDEX*			
Unadjusted	28.2	25.3	29.7 — 5
Adjusted, seasonally.....	26.4	26.6	27.8 — 5
NUMBER OF FAILURES.....	647	583	671 — 4
NUMBER BY SIZE OF DEBT			
Under \$5,000	102	88	119 — 14
\$5,000-\$25,000	332	304	343 — 3
\$25,000-\$100,000	170	147	154 + 10
\$100,000 and over.....	43	44	55 — 22
NUMBER BY INDUSTRY GROUPS			
Manufacturing	130	131	143 — 9
Wholesale Trade.....	66	45	62 + 6
Retail Trade.....	334	288	318 — 4
Construction	78	76	66 + 15
Commercial Service....	49	43	50 — 22

(Liabilities in thousands)

CURRENCY.....	\$23,399	\$24,400	\$26,208 — 11
TOTAL.....	23,760	23,775	26,300 — 1

* Apparent annual failures per 10,000 listed enterprises formerly called DUN'S INSOLVENCY INDEX.
† Per cent change, January 1953 from January 1952.

BUSINESS FAILURES include those businesses that ceased operations following assignment or bankruptcy; ceased with loss to creditors after such actions as execution, foreclosure, or attachment; voluntarily withdrew leaving unpaid obligations; were involved in court actions such as receivership, reorganization, or arrangement; or voluntarily compromised with creditors out of court.

CURRENT LIABILITIES, as used in the Failure Record, have a special meaning: they include all accounts and notes payable and all obligations, whether in secured form or not, known to be held by banks, officers, affiliated companies, supplying companies, or the Government. They do not include long-term, publicly-held obligations. Offsetting assets are not taken into account.

eral downward trend in industrial failures, except among iron and steel, chemical, and lumber manufacturers.

In retail trade, failures were markedly below a year ago among food stores, and eating and drinking places. There was a notable increase in failures among furniture and general merchandise stores. Both wholesale trade and construction suffered heavier mortality than a year ago, with subcontractors wholly responsible for the construction rise. Service casualties dropped considerably below 1952 in the transportation lines.

Geographically, failures increased between December and January in the Middle Atlantic and Pacific states, where casualties were the heaviest in over six months, and in the South Atlantic and East South Central areas where mortality rose to the highest level since 1951.

While the failure toll in New England was unchanged from a month ago, moderate decreases appeared in four regions, including the East North Central states which had the smallest number of failures since 1948.

Compared with January a year ago, there was little change in failures in most geographic areas, except for increases in the South Atlantic and East South Central states and a marked decline in the North Central region.

FAILURES BY DIVISIONS OF INDUSTRY

(Current liabilities in thousands of dollars)	Number		Liabilities	
	Jan. 1953	Jan. 1952	Jan. 1953	Jan. 1952
MINING, MANUFACTURING...	130	143	9,107	8,465
Mining—Coal, Oil, Misc....	5	1	268	150
Food and Kindred Products	18	16	1,107	547
Textile Products, Apparel..	20	33	850	1,480
Lumber, Lumber Products..	18	13	508	653
Paper, Printing, Publishing.	4	10	59	470
Chemicals, Allied Products.	5	1	2,108	5
Leather, Leather Products..	8	7	1,281	496
Stone, Clay, Glass Products.	2	7	154	432
Iron, Steel, and Products...	0	4	1,163	110
Machinery	13	13	1,145	2,453
Transportation Equipment..	2	7	45	344
Miscellaneous	17	31	359	1,216
WHOLESALE TRADE	66	62	2,590	3,161
Food and Farm Products...	17	23	911	1,067
Apparel	3	..	131
Dry Goods	5	3	250	90
Lumber, Bldg. Mats., Hdwr.	6	9	216	766
Chemicals and Drugs	2	1	56	204
Motor Vehicles, Equipment.	3	1	88	21
Miscellaneous	33	22	1,060	851
RETAIL TRADE	334	348	8,009	7,761
Food and Liquor	62	84	830	1,186
General Merchandise	16	11	596	682
Apparel and Accessories...	57	68	784	1,143
Furniture, Furnishings...	40	28	909	599
Lumber, Bldg. Mats., Hdwr.	14	14	243	303
Automotive Group	25	27	754	787
Eating, Drinking Places...	50	75	2,711	1,682
Drug Stores	13	16	319	225
Miscellaneous	30	25	863	1,154
CONSTRUCTION	78	68	2,735	2,672
General Bldg. Contractors..	32	33	1,243	1,718
Building Sub-contractors...	43	33	1,400	930
Other Contractors	3	2	92	24
COMMERCIAL SERVICE	30	50	868	4,240

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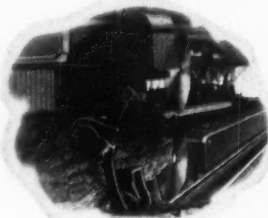


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THE BUSINESS

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Although executive development programs have been emerging in recent years as a "tide in the affairs of men which, taken at the flood, leads on to fortune," a recent study stresses that such programs merely offer a possible passage to the ports of promise and in no manner should be considered by aspiring acolytes as an indication of calm seas and prosperous voyage.

This is one of the many bits of evidence gathered by Dr. John W. Riegel in his informal yet encompassing study of the experiences of fifty leading corporations, *Executive Development*. Management men concerned with initiating programs for home-grown leadership or seeking to match their experiences against others' will find this book engrossing. To build an inventory of potential performers—immensely more important than the current concentration on the stock of goods—requires chary planning and purposeful procedures. The author proffers in detail all aspects of such a program from the search for the *raison d'être*, through the means of launching, personnel selection, progress evaluation, costs, mechanics, forms, and records. The bibliography included by the author adds to the book's value for those who would keep their companies sailing smoothly with many doughty hands ready, when needed, to grasp the helm.

University of Michigan Press, Ann Arbor, 369 pages, \$6.

Better Bosses

While some executives busy themselves with executive development, others devote their energies to the training of supervisors, who by whatever name—foremen, gang bosses, snappers, overseers—form the strong thread that stitches management and labor together. Much of the rending of the fabric of industrial peace can be traced to the weakness of the ties that bind. So, many companies have discovered rich returns in productivity and har-

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By Richard L. Small

Have you ever had an order in the bag that somehow slipped out. Was your last order as big as it might have been? Did your competitor get to a prospect who wouldn't see you? In this book a long-time, highly successful sales manager gives the simple basic rules that **WORK** in selling — no matter what your product. And he tells just

what to do to develop skill in selling. Here is a salesman's book in the down-to-earth terms most helpful to salesmen with each step in the whole sales process clearly shown. You'll find, too, valuable ideas on how best to coordinate the many activities of advertising, merchandising, and sales promotion in the total sales effort.

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ing volume entitled *Automation* which nimbly describes the distance already travelled on the road toward the automatic factory or office in which robot-like machines make decisions, correct their own mistakes, and in many ways excel mere humans. That the automatic factory is neither a Rube Goldberg fantasy nor a visionary's mirage is illustrated by the author's detailed description of such operations in America to-day.

All those concerned with the course of industry in the next decade which promises pervasive changes from the admixture of electronics and atomics will find this book offers a long clear view into the murky future.

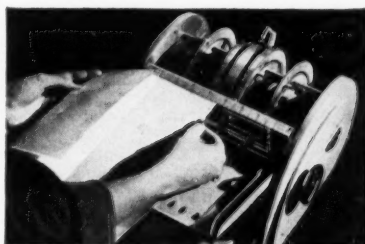
D. Van Nostrand Company, Inc., New York, 181 pages, \$3.

Things to Come

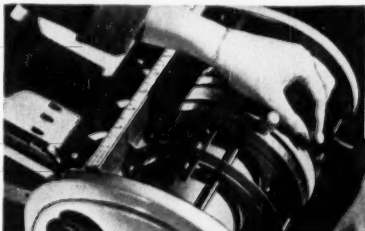
To relieve the optic discomfort of business men who are perpetually straining to see the shadowy shapes of things to come, two new studies are currently being offered. Both particularly merit sedulous scrutiny since they are the successors to similar studies done several years ago which successfully projected the prosperous course of business in the post-war period, when many were the jeremiads about imminent depression.

The first of these studies, *Markets After the Defense Expansion*, prepared by economists in the Department of Commerce and in private industry, can be secured from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. for the sum of 55 cents. In ninety oversize pages is a storehouse of information about the probable and possible condition of the four basic markets—consumer, business, Government, and foreign—in the next few years. Whether the three other sources of stability and prosperity can take up the slack when Government spending for defense begins to decline in 1955 is one of the main perplexities pondered in this study.

The other study, *The American Economy in 1960* by Gerhard Colm, is offered by the National Planning Association (1606 New Hampshire Avenue N. W., Washington 9, D. C.) for \$2. This book pushes forward the unknown several years beyond that attempted in the Government study and presents a rather roseate picture of



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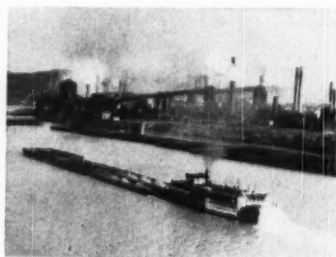
Individual _____ Title _____

the economy in 1960, burdened neither by inflation, joblessness, nor cloyed markets. How the delicate passage through the years of adjustment is to be achieved is one of the most engrossing sections of the book. Of course, the relevancy of both studies would be quickly destroyed by either disarmament or war for each assumes a protracted state of world tension.

Site Unseen

To resist the beguiling blandishments of community boosters is an essential exercise for executives concerned with plant location or re-location. To add to their adamancy there is now available a highly practical work manual, *Plant Location* by Leonard C. Yassen, an authority on the subject of sighting sites.

Perplexed by the plethora of plausible pleas for plants, many business men have turned to the professional consultant, such as Mr. Yassen, to discover the one location offering the greatest over-all advantage. Lower wage rates or offers of free sites, should not be considered especially alluring; a multiplicity of factors—transportation, taxes, utility rates, climate, community atti-



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tudes, nearness to raw materials and markets, labor laws, labor turnover—has to be disentangled so that each one can be weighed against the other. Those business men attempting to perform this task themselves will find this large volume with its many checklists, charts, and maps, as useful as a surveyor's transit.

Business Reports, Inc., New York, 195 pages, \$12.50.

New Weapons

Whether the conflict be cold or hot, the god of war holds sway in several arenas. Besides the military, political, and psychological battlegrounds, there

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is an area of conflict, frequently neglected yet undeniably vital, and that is economic warfare.

Described as international economic measures to reduce the relative strength of an enemy, the subject has been skillfully treated in a new volume that is exhaustive without being exhausting—*Economic Warfare* by Yuan-li Wu. The author conducts a tour through the arsenal of weapons for economic warfare, demonstrating by example how each was used aptly or ineptly in recent history. Such obscure devices as foreign exchange restrictions, export and import controls, pre-emptive purchasing, State trading, foreign asset freezing, and many others are presented in a sharp, realistic light.

The author stresses at the outset that the book is not merely a catalogue of weapons to be used in a war which he considers inevitable. Rather, should the Western nations score significant gains in the economic, political, or psychological fields, perhaps the awesome entry into the bloody arena of military conflict can be avoided. This nimbly written book by a Stanford Research Institute economist, experienced both in international banking and the United Nations, cuts through much of the turbid thinking about the economic aspect of American foreign policy. His point-by-point recommendations for improvement should be as welcome as peace to those endeared of documentation in their discourses.

Prentice-Hall, Inc., New York, 403 pages, \$6.

Raising Spirits

Spring is traditionally tonic-taking time and those who yearn for the non-liquid variety will be pleased by three new inspirational books. The first is pleasantly titled *How to Make Your Daydreams Come True* (Prentice-Hall, Inc., New York, 195 pages, \$3.95) and is authored by the famous salesman, Elmer Wheeler, renowned for selling the sizzle rather than the steak. While it contains the expected quota of generalized importunities, the book does offer some specific prescriptions for progress.

Another of these hortatory tracts is *How to Attract Good Luck* (Simon & Schuster, New York, 241 pages, \$2.95) by Albert Z. Carr, an author whose cheering exhortations are finely over-



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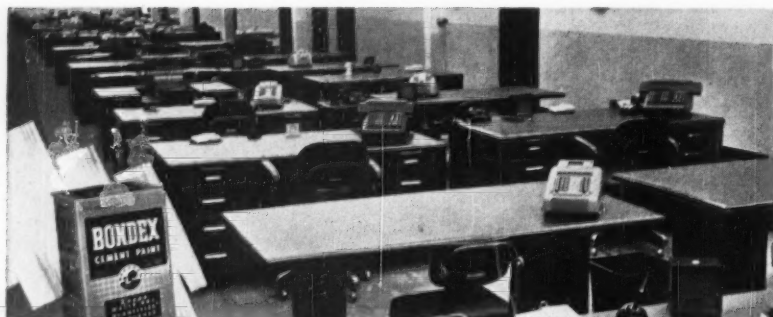
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weighed by his erudition. Defined by Mr. Carr as the purposeful response to chance, luck emerges as something removed from the realm of superstition. When Cervantes said that "anyone who does not know how to make the most of his luck has no right to complain if it passes him by," he deftly defined the scope of the subject treated in this book. Psychologists aver that one can be accident-prone; the author insists that one can have or develop a flair for fortune, whether good or ill.

The third of this tonical trio is Earl Prevett's *How to Turn Your Ability Into Cash* (Prentice-Hall, Inc., New York, 243 pages, \$3.95). Although not as unusual or provocative as the preceding book, this volume should satisfy salesmen seeking a stimulant for their sagging staffs.

Dearth of Salesmen

As resplendent with facts as a sedulous salesman, the new book by Marvin Leffer, *How To Become A Successful Manufacturers' Representative*, should be of use both to manufacturers and those who would be their agents. Perhaps because the rôle of the manufacturers' agent is neither generally known nor fully understood, the literature on the subject has been meagre as a tyro's order-pad.

While it is a field in which there has not been much writing, this book is based upon a rather rich background of information.

Drawn from the experiences of more than 500 agents as well as the author's long years in the field, this book is studded with many examples of pleasant relations between manufacturers and their agents who frequently prove more efficient and economical than salaried sales departments. Two decades ago a manufacturer of plumbing and heating equipment had a \$100,000 market in New York, using his own sales staff. Two years after turning his product over to an independent agent, his sales mushroomed to \$2 million and are today more than \$5 million.

Besides being highly instructive for salesmen who would become independent business men, the book proffers pertinent advice to manufacturers about which of their lines can best be handled by agents.

Prentice-Hall, Inc., New York, 218 pages, \$4.95.

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Dividend Notice

A quarterly dividend of 75¢ per share has been declared on the Common Stock of the Corporation payable March 10, 1953 to stockholders of record at the close of business February 13, 1953.

CHARLES P. HART
Secretary & Treasurer
New York, N. Y., January 22, 1953

**GENERAL
DYNAMICS**
CORPORATION
445 Park Ave., New York 22, N. Y.
DIVISIONS



PRESIDENT

(Continued from page 26)

of our Board of Directors without portfolio. They have no voice in, nor do they attend, any regular directors meetings, but we take advantage of their knowledge of the lines of business they represent; they have been of great value to me over the years with their judgment and advice.

You, Mr. President, will have no regrets if you give your full confidence to your banker; he will be just as anxious to extend you that loan as you are to get it. If you really have a good reason for getting a loan and you do not get it, be slow about severing your connections from his institution. Over all the time that you will hold the presidency of your company, you and your banker will see eye-to-eye more often than not.

Now, if you are the president of a small business and have only the start of your first ulcer, you may be interested in the rules for small business men that I have followed for the past twenty years. Put those that you like in effect. If you are between 40 and 55, have an electro-cardiograph taken, work steadily with vacations twice a year, and you will have accomplished more in your small business with pleasure and honor to yourself than may be possible for a big company president.

As the president of a well functioning small company, you are solicited to be president of this, director of that, and manager of the other, and unless you are careful you will be spending more time on the outside affairs of club and civic nature than you do at your own job.

It is your duty to give a certain amount of your time, brains, and energy to the betterment of the community, but be sure that your desire to see your name in print does not overcome your better judgment as to the time you can afford to take away from your business.

Here is a list of suggestions which should be helpful in the successful operation of a small business; they tie in with the suggested duties of its president, listed on page 25.

The President should see to it that his *General Manager* adheres to the company policy while performing the general managerial functions which

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include the five major duties listed below:

1. Supervising all activities of the business through a definite working knowledge of each department of the corporation;
2. Acting as a fair and impartial judge in settling differences of opinion or conflict between departments of the company and between the company and its customers and its suppliers;
3. Cultivating a mutual respect between competitors and compelling respect for the corporation by high standards of business ethics and competitive tactics;
4. Meeting with department heads weekly in order to lay out new plans and to improve old ones; and assist junior officers in improving the working knowledge of their positions; and
5. Organizing the personnel of the company so that a smooth running machine will always be maintained even though part of the working force may be absent.

Executive Analysis

The President of the small company should further see that his *Sales Manager* thoroughly analyzes his market and the territory which it serves. That he is thoroughly sold on his company and the products it has to sell, and that he has a thorough knowledge of the company's products and is able and willing to impart this knowledge to his salesmen.

He should see that the sales manager is a keen judge of human nature to



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help him know and analyze the problems of his salesmen; that he aid and assist salesmen to close deals when necessary, but not do all the salesmen's work; and that he work out territories within the distances that the corporation can adequately and profitably serve customers.

It would be good also to observe that the sales manager use limited discre-

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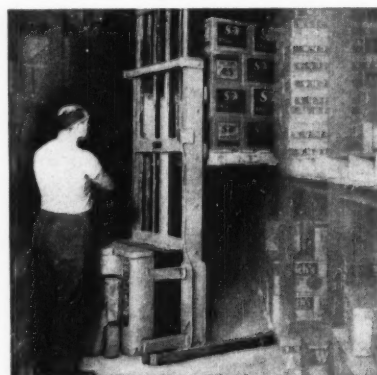
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tionary powers in the absence of higher authority in dealing with salesmen and customers of the company; that he plan sales campaigns and bring out slow-moving merchandise through promotional efforts; that he pass on advance knowledge of new products to the customers through the salesmen; and that he make it a policy to know and have the salesmen know the man in the customer organization who has charge of, or actually works with, your product. This is important in addition to knowing the purchasing agent.

Sales Planning

The sales manager should know when it is useless to have a salesman spend time on a customer who will not give him an order. He should hold weekly sales meetings where the past week's work is analyzed, plans are made for the emphasis of at least one new product in the following week, any particular problem brought up by any salesman is discussed, and any new ideas are passed on to all salesmen.

He should lay particular emphasis on the fact that the salesman is to most customers "The Company" and his actions and methods reflect directly on the company. It is important that he ascertain competitive practices and bring about plans to combat them in co-operation with the general manager. He should be aware of dealing with two factors; human beings and the company's products. Finally, he should work with the credit manager on all accounts so that sales not be retarded and the company not lose money.

The President of the small company should be close enough to the operations to be sure that the *Credit Manager* adheres to duties which include: to save the company money; to work with the sales manager relative to the capital structure and the credit risk of all customers; to advise the general manager on the status of accounts receivable and the procedure taken on doubtful and bad accounts.

The credit manager should also have access to credit rating facilities and to use such ratings as a guide in granting of credit; have a friendly relationship with competitor credit managers for a mutual interchange of credit knowledge; have the fortitude to stop a bad risk at once; and have the ability to

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Selection of a plant site, like the selection of executive personnel, is subject to experience rating and aptitude testing.

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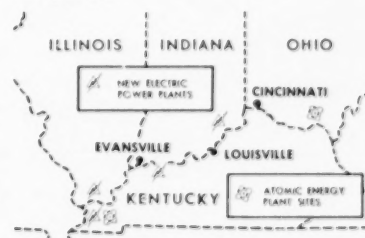
Evansville industrial development has been consistent and persistent, rather than spectacular and erratic. Most of the city's 194 manufacturing establishments have impressive records of profitable longevity — 25, 50 and on up to more than 100 years of continuous operation.

These "old timers" in Evansville include producers of refrigerators, pharmaceuticals, food specialties, office furniture, cigars, excavating equipment, automobiles, farm implements and sundry other products for consumer and industrial usage.

Such diversification makes for stability, bulwarked by ruggedly American residents, and favored by

natural advantages in transportation and mineral resources.

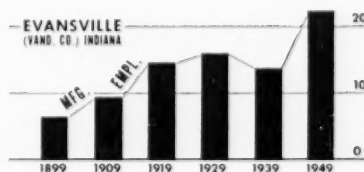
Beyond that — and importantly characteristic — Evansville has alert and aggressive civic leadership, conscious of the potentialities of its location in what has been termed "the American Ruhr" . . . which will shortly contain what is said to be the world's largest concentration of electric power.



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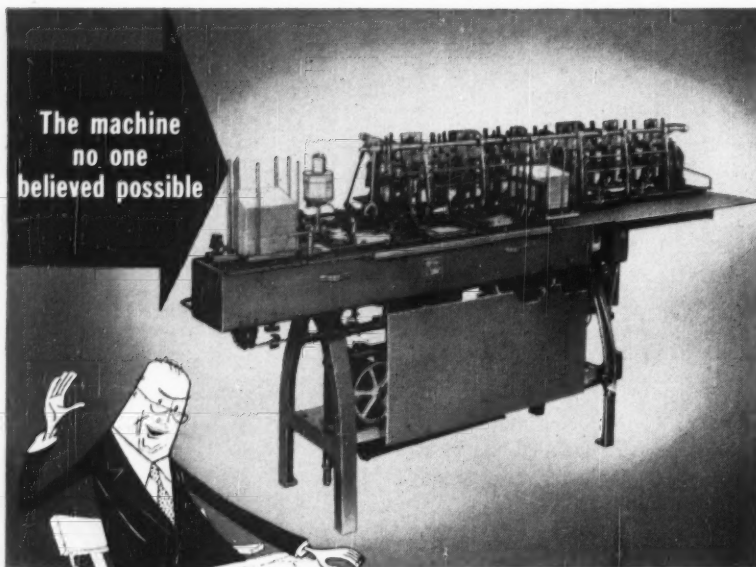
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CASE HISTORY NO. 37
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INSERTS INTO ENVELOPE

SEALS ENVELOPE

PRINTS POSTAGE INDICIA

COUNTS & STACKS

judge human nature and to decide on moral credit in the absence of financial credit.

The credit manager's job requires him to be firm, yet just, in dealing with the company's customers; to formulate a collection policy and carry it out systematically; to advise the company's customers as to their credits and collections and to win the customer's respect through sound financial knowledge; insist that the customer's best interest is to discount bills; and to personally acquaint himself with the officers of financial institutions identified with the industry for co-operation in keeping the customer's obligations in the proper channels as well as to follow up hard on slow or doubtful accounts.

Office Efficiency

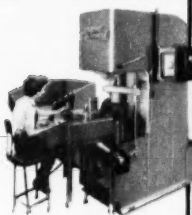
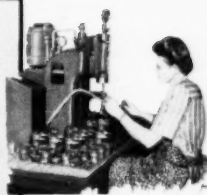
Another of the President's responsibilities is to see that the *Office Manager* carries out his duties as follows:

1. To keep himself thoroughly acquainted with all paper transactions within the company so that a proper bookkeeping system together with a filing system may be maintained;
2. To supervise the bookkeeping, filing, billing, and paying of all vouchers and invoices;
3. To co-ordinate with the purchasing department with regard to all incoming invoices and direct shipments;
4. To see that the files are kept in proper sequence and are up-to-date, while maintaining old files for the years directed by the Internal Revenue Department and by company policy.
5. To supervise the payroll and be



"There really isn't any good time to see him. He's irritable all morning before lunch and drowsy all afternoon after it."

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| <input type="checkbox"/> BENDING | <input type="checkbox"/> BLANKING | <input type="checkbox"/> TESTING |
| <input type="checkbox"/> BROACHING | <input type="checkbox"/> STAKING | <input type="checkbox"/> SWAGING |
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OTHER _____

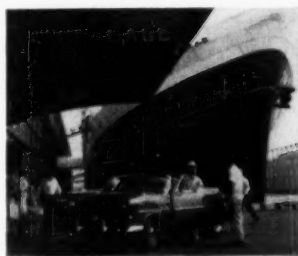
familiar with and have a working knowledge of, all social security laws and withholding taxes.

6. To see that invoices are rendered promptly and that statements are ready as near to the first of month as practical.

7. To set up reference data in corporation taxes, both State and Federal and to watch for penalties for oversight or non-payment.

8. To supervise the typing so that letters are neat, properly spelled, and spaced.

9. To correct at once any errors in invoicing and to dictate letters of explanation to customers.



MONKMEYER PHOTOGRAPH

10. To account for all moneys, checks, drafts, and financial transactions of the company and the banking thereof.

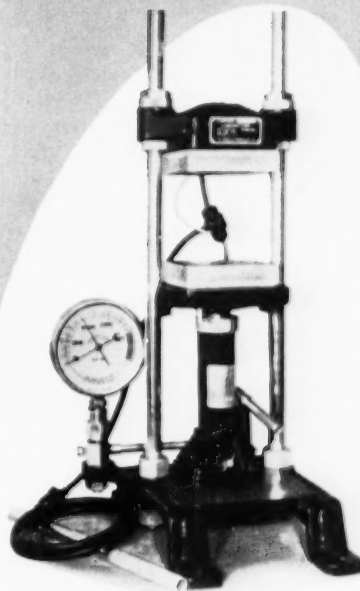
11. To co-ordinate with the purchasing department for the pricing of invoices discounts, freight rates, and so forth, relative to both the billing and the paying of invoices. To consult with the sales department relative to customers' invoices and accounts.

12. To prepare a monthly statement and balance sheet for review by higher authority.

13. To live within his income and thereby avoid temptation when handling company funds.

Yet another of the president's responsibilities is to see that the *Purchasing Agent* carries out his duty to treat with proper respect the salesmen who call on the company; to be familiar with quantity discounts, freight rates, and conditions affecting the cost of articles purchased for the company; to refrain from giving the prices of one competitor to the salesmen of another; to cultivate the supplier's salesmen to get advance notice of impending price changes and the bringing out of new products; to be loyal to the main sources of supply as they will do more for him as a regu-

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Please mail copy of latest booklet describing The Carver Laboratory Press and its many uses in Industry. (No salesman will call.)

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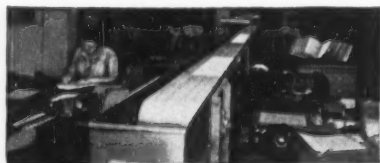
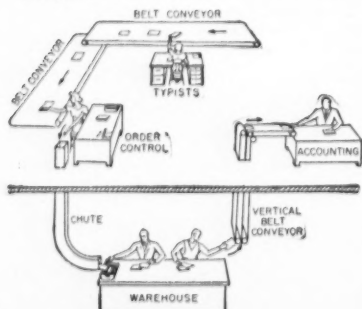
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Gentlemen:

Without any obligation on my part, please send more information on how I can reduce my paper-handling costs.

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lar outlet than if he buys from everybody; to know that price is not always the main factor in purchasing—keep in mind the promptness of delivery, the past good or bad performance of your supplier.

Effective Purchasing

It would also be well for him to remember that the company's salesmen are sold on the present product before deciding to make a change; to refrain from abusing discretionary powers in the absence of higher authority; to co-operate with the sales manager relative to cost, transportation, and delivery schedules of the items requested by him; to beware of bargains, stick to materials and suppliers of proven merits; and to keep foremost in mind the customer's preference for a particular type of merchandise and to have sufficient confidence in your present line of merchandise so as not to be too easily swayed by other salesmen.

In addition he should attempt to co-ordinate with the shipping and receiving departments relative to information on incoming and outgoing shipments; and to price all purchase orders and to co-ordinate with the billing department relative to direct shipments.

It should be insisted upon by the President that the *Salesman* conduct himself in such a manner at all times as to reflect credit on himself and his company. It is further important that he thoroughly understands his catalog and price lists so that he will never appear uninformed relative to the company's product in the presence of the customer. His catalog and price list



"Go right in Mrs. Haughty. He's braced for you."

AS MAYOR OF THE SOO

I Invite
you
to learn
the facts
about



James Robertson
Mayor

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MICHIGAN**

It is my pleasure and privilege to extend this invitation to all interested industry. Our city has been progressive in its assistance to industry and its relocation problem. The Industrial Commission is prepared to place in your hands all data that will aid you in making a sound, business-like decision. Your interests will be given every consideration in the light of your needs. It is our hope that your industry will avail itself of this cooperation.

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All the important facts are in this book, "The World Famous SOO." It's yours free for the asking.



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SAULT STE. MARIE CITIZENS'
Industrial Commission

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should be kept up-to-date at all times.

The salesman must cultivate the ability to make people like him. A customer will not spend his money with someone he does not like. And he should remember he is a Specialist in the eyes of the customer and must be sure to know the subject; in any dealings he must not commit himself or the Company to an obligation that higher authority might turn down without prior consultation. He must not borrow money from the customers under any circumstances, nor should he enter into arguments with the customers; the argument may be won, but the sale lost. The salesman must not talk down to the customer, always treat him with respect.

Setting Standards

The President should assure himself that the salesman is sold on the company and its product. If you are not convinced yourself, you cannot sell anyone else. The salesman must feel free to consult with the sales manager relative to anything that affects sales. When given an account to collect, he should be straight-forward about the transaction yet diplomatic to the end that he gets the money, or positive information for the credit manager, and still hold the customer's good will. It is important to be neat in appearance but not flashy; the car should be as clean and neat as the weather permits. The salesman should study the individual



GENDREAU PHOTOGRAPH

customer's likes and dislikes and act accordingly. He should not drink if there are any important calls to make after drinking.

The customers should be kept acquainted with new products and price changes at all times. When entertaining, the salesman should remember that the customer's enjoyment is the foremost consideration. The salesman

ARE YOU WASTING EXPENSIVE MANPOWER

... and valuable storage space too!

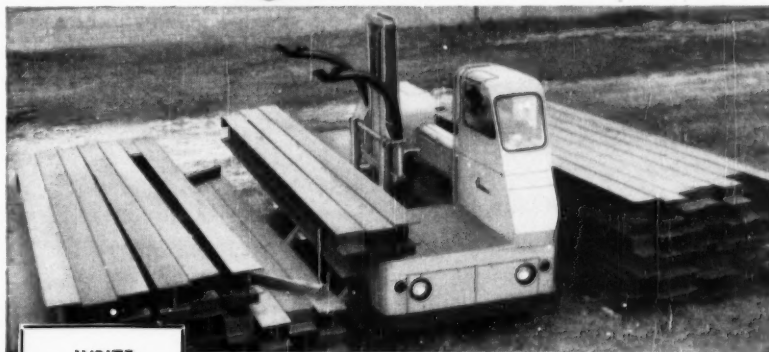
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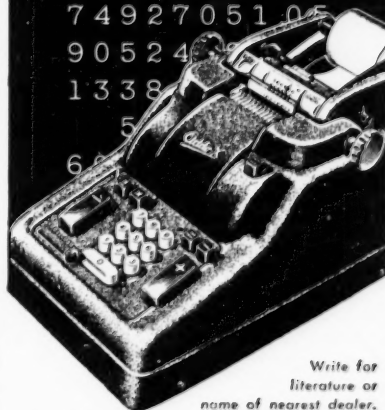
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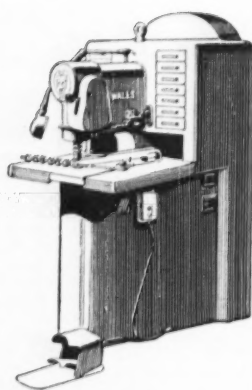
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TIME-
STUDY
MAN
MUST
AGREE**



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by WALES
Fabricators
ARE ASTOUNDING!**

A radio chassis, 10" x 14", with 27 holes and 4 notches was produced including setup in only 9.3 minutes and subsequent pieces in only **1.8 min.**

An automotive channel, 28" long with 12 holes was fabricated including setup in only 3.37 minutes and subsequent pieces in only **29 sec.**

An electric refrigerator part, 29 1/2" x 8 1/2" with 10 holes and 4 notches was fabricated including setup in only 5.61 minutes and subsequent pieces in only **37 sec.**

An electronic chassis, 12 1/2" x 11 1/2", with 118 holes and 4 notches was completed including setup in only 32.45 minutes and subsequent pieces in only **6.44 min.**

A part for farm equipment, 72 1/2" x 22", with 32 holes and 26" nibbled cut-out was finished including setup in only 12.01 minutes, subsequent pieces in only **2.32 min.**

A circle, 24" in diameter with outside diameter nibbled and 5 holes punched was produced in only 4.26 minutes including setup and subsequent pieces in only **2.38 min.**

● The above time studies, made under actual production runs with average operators, were taken at random from hundreds of time studies parts.

Wales Fabricators fit into your metal fabricating picture wherever limited runs do not justify expensive, single-purpose dies for punching, notching or nibbling.

Wales patented "Quick Change" System plus up to 165 strokes a minute, makes possible these startling "never-heard-of-before" time study figures.

Check with your time study man and have your secretary write for the complete story in Catalog 10-A.

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Wales-Strippit of Canada, Ltd., Hamilton, Ontario

Specialists in Punching and Notching Equipment

must keep out of debt, not gamble, or drink liquors to excess. He should remember that he is on his own responsibility most of the time, and not abuse the privilege. He should form a habit of quoting published prices and to sell himself and his Company's product and service rather than quoting preferential discounts in order to get an order.

Encourage Responsibility

Finally, the President should see to it that all employees of the company assume these general responsibilities. Each and every member of the corporation has the responsibility for so conducting his person and his position that it reflects credit to himself and his company. To each department head rests the entire responsibility for whatever occurs within his department. Subordinates may be the cause of some miscalculation or infraction of policy

The AUTHOR

R. J. Makarius started his wholesale plumbing and heating supply business 20 years ago, after he had acquired a background of about fifteen years experience in that field. He has been the top executive of the company since its inception.

Active in Dayton, Ohio community activities for many years, Mr. Makarius was elected a Director of the People's Bank of Dayton in 1950, the same year in which he won an award for outstanding service from the Dayton plumbing and heating industry. In 1952, he became a Vice-President of the Central Supply Association of Chicago.

Serving as an officer of the 411 Bomb Group in World War II, Mr. Makarius was released at the war's end with a major's commission.

or rules, but that does not relieve the department head from responsibility to his superiors.

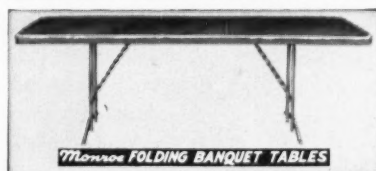
Wherever one or more duties are performed by one person he shall be responsible for all duties so performed, the senior duty to take preference to the junior duty with accountability for both. Every employee of the company, in whatever capacity he serves, is in his dealings with the customers, or the public, a salesman representing the company. He should be honest, be encouraged to admit mistakes without bluff.

THE END

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Replace crowded "hat trees" with efficient S-6 Office Valets (have room for guests too). Each Valet provides 6 spaced coat hangers, 6 ventilated hat spaces, umbrella stand and overshoe platforms in 30" x 16" floor space. Keep wraps aired, dry and "in press". Lifetime welded steel construction—never loosens, wobbles or tips over. Choice of modern baked finishes. Sold by leading office furniture dealers everywhere.

Commercial, industrial and institutional wardrobe equipment and complete checkrooms. Stationary and portable Wardrobe and Locker Rack, for the office and the home.
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National

TRUCK LEASING SYSTEM

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**ReLEASE
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Send for bulletin D-1



MEMO

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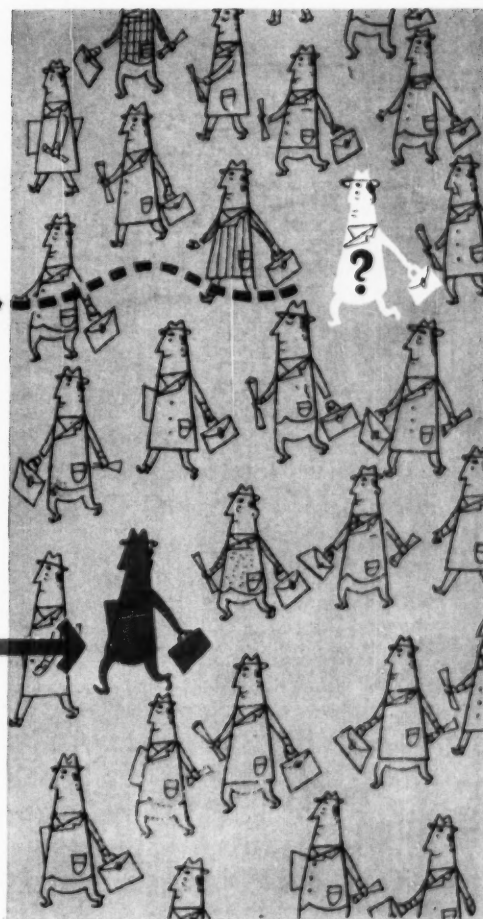
how easy
is it for
buyers



to find
the right
sellers



In the answer to that
question lies the key
to reduced selling cost.



the answer is: Often it is VERY DIFFICULT for a buyer
to find the right seller... and he'd like to have more sellers make it easier for him!

So what do some marketers do to help their prospects find them? They add
to their *selling promotion* the great force of *buying promotion*... making their
products easier to buy.

How? They anchor adequate product information at the elbows of the
people most likely to need it, in a way that keeps it instantly accessible, so
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help them step up sales efficiency by making some of their *selling* tools better
buying tools for their prospects. Right now, 1,480 manufacturers use Sweet's
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following markets: Product Engineering, Plant Engineering,
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"The easier
you make it for people
to *buy* your products,
the easier
they are to *sell*."

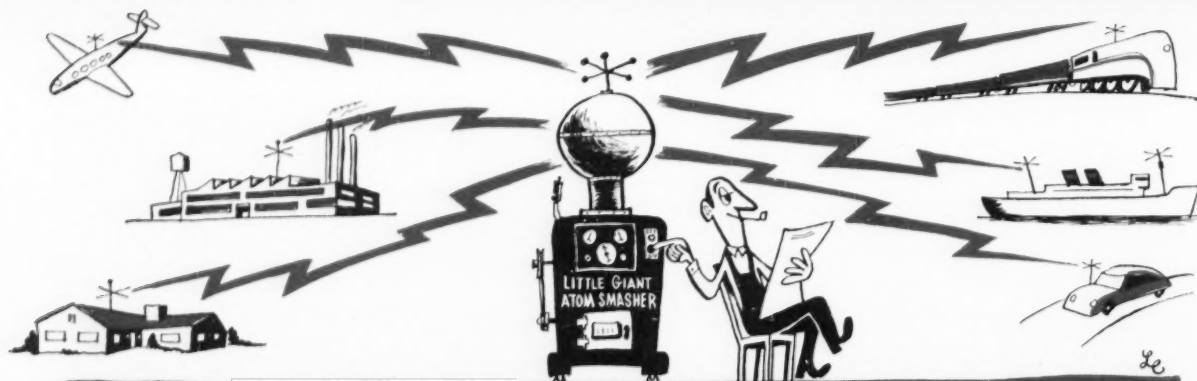


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The Business Quiz

LORRAINE CARSON

Associate Editor, DUN'S REVIEW

How strong a background have you to meet the challenges in your atomic future? Take ten points for each correct answer; a score of 90-100 is excellent, 70-80 is good, 50 is passing; below 50? Hmmmmmmmm! The answers are on page 109.



1. The atomic pile, or furnace, in which the first atomic fire on earth was lighted was designed by a scientific team headed by:

- | | |
|---|---|
| <input type="checkbox"/> a. Albert Einstein | <input type="checkbox"/> c. Gordon Dean |
| <input type="checkbox"/> b. Enrico Fermi | <input type="checkbox"/> d. Abner Yokum |



2. Atomic energy can be used for diverse purposes from detecting impurities in foods to measuring how well the washing machine washes, by using a by-product, purchasable from the Atomic Energy Commission, named:

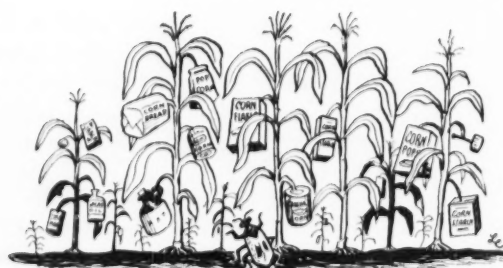
- | | |
|---------------------------------------|--|
| <input type="checkbox"/> a. electrons | <input type="checkbox"/> c. chlorophyl |
| <input type="checkbox"/> b. isotopes | <input type="checkbox"/> d. cymogene |

3. It is expected that stationary atomic power plants may be designed in 1953 to generate electricity to dwellers in areas where ordinary fuel costs are high. Once designed, it is estimated that a plant could be built fairly quickly at a cost of about:

- | | |
|--|--|
| <input type="checkbox"/> a. \$5 million | <input type="checkbox"/> c. \$50 million |
| <input type="checkbox"/> b. \$25 million | <input type="checkbox"/> d. \$65 million |

4. The cost per kilowatt-hour of electricity generated by atomic power might compare this way with that generated by waterpower:

- | | |
|--|--|
| <input type="checkbox"/> a. half as high | <input type="checkbox"/> c. twice as high |
| <input type="checkbox"/> b. the same | <input type="checkbox"/> d. four times as high |



5. The creation of new varieties of important food plants, which might normally appear only in the course of centuries, can be expedited by atomic energy. The rate of increase in mutations resulting from the exposure of corn kernels to atomic radiation is closest to:

- | | |
|---|--|
| <input type="checkbox"/> a. 100 fold | <input type="checkbox"/> c. 20,000 fold |
| <input type="checkbox"/> b. 10,000 fold | <input type="checkbox"/> d. 1 million fold |

6. A molecule of Uranium 235, the element used in starting the chain reaction for an atomic fire, is 235 times heavier than a molecule of this element:

- ☐ a. lead
- ☐ b. gold
- ☐ c. hydrogen
- ☐ d. nitrogen



7. Where is 99 per cent of the energy of the cosmos concentrated:

- ☐ a. the nuclei of atoms
- ☐ b. coal deposits
- ☐ c. petroleum deposits
- ☐ d. Wheaties

8. While an ordinary fire needs oxygen to keep burning, an atomic fire needs neutrons which must be released from:

- ☐ a. the nuclei of atoms
- ☐ b. Government warehouses
- ☐ c. plutonium
- ☐ d. uranium

9. The most powerful atom smasher in the country to-day is located at:

- ☐ a. Brookhaven National Laboratories
- ☐ b. University of Chicago
- ☐ c. University of California
- ☐ d. Oak Ridge, Tennessee

10. The amount of money the United States will have spent on atomic energy by June 30, 1953, is closest to this figure:

- ☐ a. \$800 million
- ☐ b. \$970 million
- ☐ c. \$6 billion
- ☐ d. \$9 billion.

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company-wide P-A-X
keeps down communication costs

convenient P-A-X
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*T.M. REG.
IN U. S. PAT. OFF.

READING

(Continued from page 31)

Even the professionals don't know too much about what goes on in the mind during reading. We can't expect the training director, and certainly not his boss, to know as much. Nevertheless, management is aware of the reading problem and is often willing to pay well for training. The natural result is a good supply of teachers willing to supply the demand and to collect the fees.

At present, all sorts of courses, mostly emphasizing speed, are being presented. I suspect that all of them accomplish something useful, if for no other reason than that the simple focussing of attention on the problem is bound to do some good. Nevertheless, you have a right to expect something more than this.

I know that in some cases management has failed to see an improvement in efficiency following training. The net result of this is a feeling that "there's nothing in this reading training." As a worker in this field, this hurts me because I know what can be accomplished. My chief reason for writing this article is a desire to clarify, as far as my experience enables me to, the confusion surrounding this whole matter.

First of all, reading has to be taught, just as does any other subject, with a typical, long-accepted, and irreplaceable teacher's approach. He must study the problem, set up his objectives, plan his course of study, select or prepare his materials, and proceed.

Naturally, he will use whatever training aids will help him accomplish his objective. The only thing wrong with training aids is tailoring the course to fit them, instead of adapting them to fit the course.

He will also plan to test his results as best he can, but won't rely too much on precise results from any program for evaluating reading improvement. I'm not sure of the adequacy of even the best of the objective tests now available for measuring reading skill at the level that we're discussing. Even if the tests were still better, one couldn't be too confident of the validity of the score for any individual. Subjective factors affecting the student at the time of testing may destroy the value of his score.

I've carried on a number of con-

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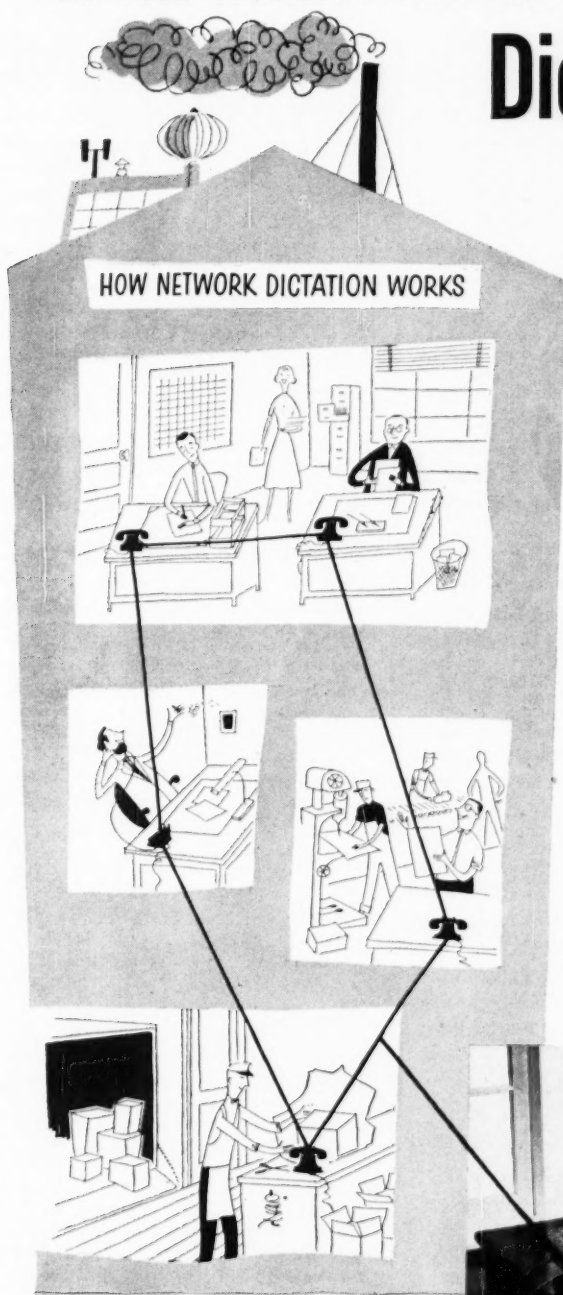
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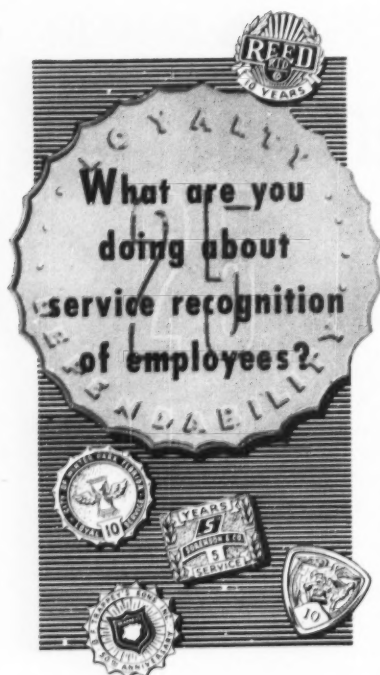
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trolled experiments and have seen men go up or down sharply in their scores simply because they felt differently on different days. No matter how careful you are, you can't completely control the testing conditions as you could in a laboratory chemical experiment. I do feel that the average score for a fairly large group has value for purposes of comparison.

Eye Movements

I said earlier, that even the professionals don't know too much about what goes on in the *mind* during reading. Fortunately, or unfortunately, we do know a good deal about what the *eyes* do during reading. Furthermore, we have a very ingenious instrument that shows us exactly what the eyes are doing at any given instant. This is the ophthalmograph.

This instrument houses a pair of cameras which make a photographic record of the movements of the eyes as the subject reads a short selection. In reading, the eyes move across the page in a series of short jerks, fixing in turn on separate words or groups of words. These are recorded on a strip of film.

The film yields data as to the total number of stops or fixations, the number of words picked up in the average fixation, and the total time for reading the selection, usually 50 words. It also clearly indicates the regressions, or cases of going back and re-reading.

The ophthalmograph has great diagnostic value and reveals certain defects



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in the seeing pattern followed in reading. Because a second test on this instrument, either with or without reading training, is almost bound to result in greater speed, there is a great temptation to express this result in terms of a rated reading speed in words per minute. The exactness of the calculation has appeal for those who are impressed by figures.

Reckless Speed

But sometimes a student decides to "beat the machine" and flicks his eyes over the selection in half a dozen stops totalling only a second for the 50 words. This proves (to some) that he is capable of reading at 3,000 words a minute.

Comprehension? There is a measure for that too. A 10-question true or false test follows and the student is required to verify or deny that Andrew Jackson served two terms as president. In any event, you do have before-and-after scores for speed of reading and for comprehension. If you wish to use them, you can convince many people of the excellence of your training.

Then there is another widely-used and useful training instrument. This is the tachistoscope, or flashmeter. It is a slide projector with a camera shutter which enables the operator to determine the period of exposure. Professor Samuel Renshaw of Ohio State University introduced this instrument into Air Force training during the last war to develop quicker and more accurate identification of aircraft.

Teachers of reading use it to train students to pick up an increasingly large span of written material at one look. William V. Herbert of the New York Life Insurance Company remembered his airman son's experience with the flashmeter during the war, and used it to train the machine operators in his Actuarial Department. They got so they could read an 8-digit policy serial number in one look instead of three.

Result? Decreased fatigue for operators . . . production up 17 per cent.

Another instrument is put out by a variety of companies under such names as Reading Rate Controller, or Accelerator, or Pacer. It is a box in which the reading matter is placed. The problem is to keep ahead of a shutter which moves inexorably down over the

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sheet you're reading and covers it up if you lag. The rate of move of the shutter can be set so as to require you to read at any rate desired.

Timed reading films are put out by the Harvard University Press and used widely. These use the old bouncing ball technique of the filmed songs, except that in these you have no choice as to where to look. The light moves on across the line and you must follow. No looking back ... the words are gone. Successive films increase the amount you must see at each fixation, and the over-all speed. The material used is interesting and well-organized, and each film is followed by objective questions.

Original Material Useful

There is a small body of textbook and workbook material that can be used in connection with reading training. Most of it, however, was prepared for students in college remedial reading classes and may not have particular value for business men. The executive and his son in college may make the same score on a reading test, but there are substantial differences in their interests and in the way they think. So the successful trainer of adults usually ends up by preparing his own material to suit his students' needs and interests.

The instruments and materials just described are used by most of the workers in the field, but in entirely different ways. The application depends on which of the two chief philosophies of reading is followed. A great many people think that reading is principally good seeing, and it must be said that most of the publicity about reading has stemmed from feats in this skill.



Try to restrain your womanly instincts, Miss Herron—don't keep asking, "Where are you going? ... When will you be back?"

Training of this sort tends to emphasize rather extensive number-recognition practise with the flashmeter, followed by timed reading on the shutter-box. The student does increase his span of visual recognition, and is likely to form good habits of moving rapidly along in his reading without regressing.

Aids, Not Remedies

This program can be given on an individual basis, as a sort of treatment. Students usually find it rather recreational in nature. I believe that some of them gain in their reading ability on simple material, but are not much helped to handle the complex material business men often face.

If I seem cold toward the methods just described, it's because I don't think that what is going on during this process is reading at all, or at least not the kind of reading that we really need to improve. Dr. Center said a long time ago, "Reading is thinking." A lot of psychologists and teachers have been agreeing with her ever since.

There is, of course, co-ordination



MONKMEYER PHOTOGRAPH

between the mind and the eye, but the eye is simply the servant of the mind, sending impressions there just as rapidly as they can be absorbed. It is possible to cast your eyes over a page of print without any reaction by the mind at all. Many readers can testify to how often they have gone through a whole section of prose without capturing the thought.

That isn't reading at all, although it may be seeing, and well-disciplined seeing at that. Furthermore, there's no assurance that the well-disciplined seeing will ever be followed by understanding or the other things that we want to get from our reading—no assurance that is unless we devise a teach-



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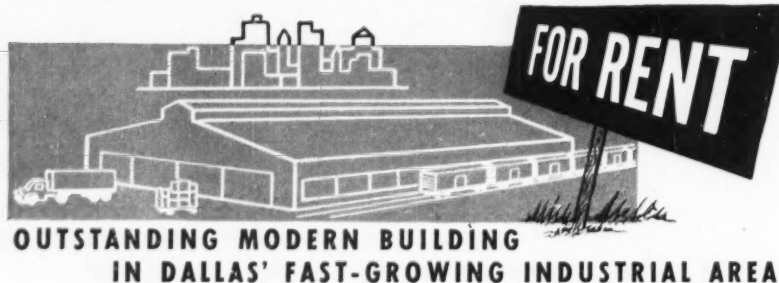
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ing system aimed at the things we want.

Those of us in the other group think that reading is a complex mental operation. We learn from experience that most of our students already have more seeing skill than they need, but that they're not using properly what they have. We think that rapid seeing of a page is useless unless the mind is equally rapid in organizing and evaluating the material read, and in mentally sorting the wheat from the chaff.

All the Ingredients

We're a little impatient with statements that mention speed of reading without reference to the difficulty of the material or the purpose of the reader, or to the reader's success in accomplishing his purpose. Comprehension and speed *do* go hand in hand, and the good reader is usually a fast reader. The fast reader, however, isn't necessarily a good reader. Comprehension is fundamental and must come first.

Using mechanical training devices without primary regard for comprehension may actually interfere with the student's progress. I find that, in such situations, their almost clinical concern with what their eyes are doing makes it hard for the author to make an impression. I'm so anxious in my own teaching that the student concentrate exclusively on getting the author's thought that I've stopped discussing eye movements with the students.

The method that I find effective is not at all recreational and has no more magic in it than any good teaching. It calls for the hardest sort of mental dis-



"But why should you, a total stranger, be so anxious to save Mr. Kretlo money?"

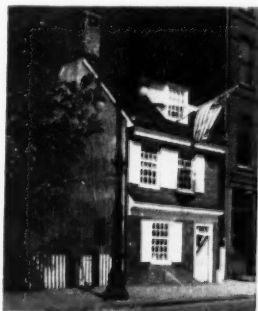
cipline. What must be taught is *logical thinking about written material*.

This would take too much if most of the students' thinking about their own work were not already logical and orderly. They simply have never been taught how to transfer this skill to studying the other man's ideas, set down in symbols on paper.

Common Faults

Most of them read inattentively, and with many bad habits. They are inflexible in their approach and treat every word as though it were golden. They remember details, but can't see the forest for the trees. They don't see organization in written material, miss key words and important transitional words and phrases, and never sense the over-all pattern that the author is following. They don't enter into that unity of thought between writer and reader which results in a transfer of thought instead of a memory of words.

Because communication is faulty, they confuse the author's opinion with what he has attributed to another and,



BEISY ROSS HOUSE—MONKMEYER PHOTOGRAPH

in turn, put their own thoughts into the author's mouth. This is why, even when the writing is good, two people can read the same piece and end up with different ideas of the content.

Doing the job that I have just described is tough, but it can be done and it's worth doing. The teacher has certain advantages on his side. After leaving college most men fix bad reading habits, but they do develop other useful skills that affect reading. For many, vocabulary improves. Furthermore, the student is probably competitive by nature and training, and he fights to do as well as the rest, once he gets over having his pride hurt.

Incidentally, there's no sense in ad-

Slice of the morning!

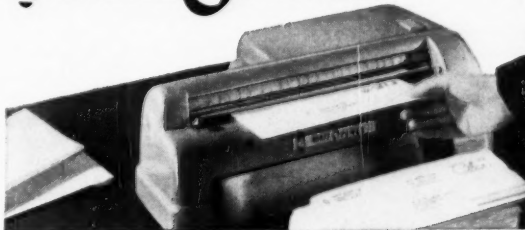
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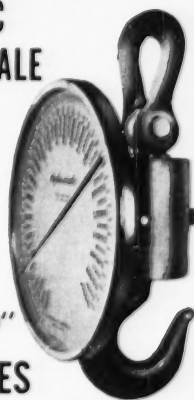
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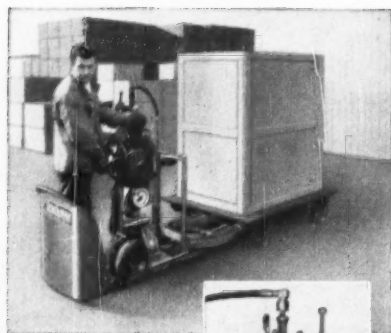
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vertising the reason for this hurt pride. Scores on tests should be kept confidential between the teacher and his students. After all, some will always do better than others, and all you want is as much improvement as possible for every student.

No Easy Road

The fortitude of the student and the teacher is likely to come in handy before the course is finished. The teacher is probably working as hard as he can to break habits that have been established for years, while at the same time setting up new patterns. The student agrees with the logic of the approach, but needs time to master it.

Halfway through the course he may well find himself in a state of frustra-



The AUTHOR

Russell G. Ranney was graduated from New York University where he also completed graduate work in the field of education.

Starting as a high school teacher in the public schools of New Jersey, he rose to the post of superintendent.

Largely through his work at New York University he became interested in the problems of reading and decided to concentrate his efforts in that field. He was named an instructor in the New York University Reading Institute and later became Associate Director in charge of the adult program.

In 1949 Dr. Ranney was made chief of the Special Instruction Section of the Signal Corps Engineering Laboratories at the Army Signal Corps base at Fort Monmouth, N. J. His responsibility in this position is for the training in the field of human communications for the civilians and officers who are mainly scientific and technical personnel. He has also served as instructor of special reading courses for private companies including Standard Oil Development Company, IBM World Headquarters, New York Life Insurance Company, and Atlantic Refining Company.

tion because of his lack of success. Incidentally, anybody who thinks that grades don't count with adults should see the students in my classes fight for part credit on the questions that always follow a reading exercise.

They do stick, however, and it usually works out that they get over the hump and meet increasing success. You can't stop the course at this time, however. Reading is a highly personal skill; the good habits must be made automatic and this takes time. I have never given a course in less than 26

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hours and I try to make almost all of this actual practise.

I have indicated that in the actual conduct of the training the instruments are useful. They enable the teacher to set up a controlled situation in which the eyes must automatically follow the desired pattern, leaving the mind free to concentrate on the special things that the instructor wants the student to get out of the material. They are crutches, however, and must be used only where useful and necessary.

To Hold New Skills

The controlled situation must change gradually to one in which the student does the right things without controls, or else there is danger that he will revert to his old, bad habits outside the classroom. If one allows enough time for training, he will not only retain the new skills, but will continue to improve.

Some random points that should be considered. You have to make sure that some of the training material closely resembles what your student reads on the job; otherwise he'll insist that what you say doesn't apply to what he has to read on the job. Don't believe that the older men can't learn new tricks; in a recent class the two highest scores were made by two of the oldest men in the group. Don't believe that reading training is just for the poor readers; the good readers can improve substantially, although it may be of first importance to bring up the slow ones first.

Finally, don't expect miracles from the teacher. Do expect a professional approach, real training, and not just gadgets for the sake of gadgets. Distrust wild claims and any suggestion that reading improvement comes easily.

Don't expect to be able to calculate in dollars and cents the exact amount that will be saved as a result of training. If communication is important in your business and you get the sort of training that you need, you'll be able to see results.

The engineers here at Fort Monmouth say they've saved an hour a day of the four or five they used to spend wading through the in-basket. In-baskets are just as full in business, and as much valuable time can be saved.

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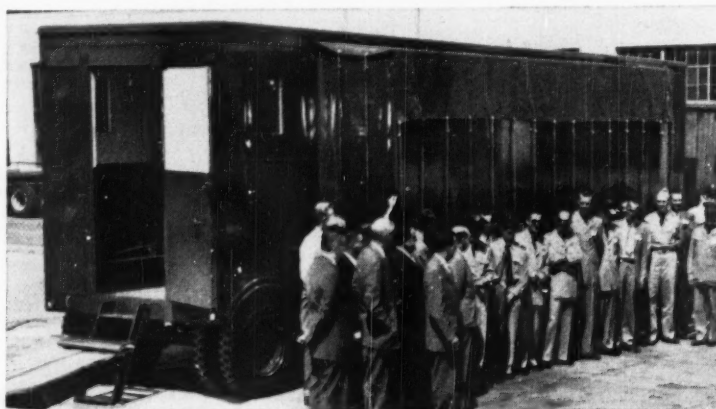
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HERE *and* THERE in BUSINESS

WHAT'S NEW AS OBSERVED BY THE EDITORS OF "DUN'S REVIEW"



Army, Navy, and Air Force officers and civilian production executives inspect the new expansible trailer at Cincinnati.

14 ft. by 20 ft. is the size of the living room that many a newly married couple has cherished.

In this case, however, those dimensions describe a new truck-trailer which has telescopic side-walls. The new trailer, in transit, is eight feet wide, thus in conformity with laws regulating vehicle widths. On arrival at destination one man with hand crank can extend the side walls until the overall width is more than fourteen feet.

This new truck-trailer is a development of Trailmobile, Inc., Cincinnati, a subsidiary of Pullman Incorporated.

First units are for use by the U. S. Air Force National Guard, but company engineers point out that a vehicle of this type can be used for many other tasks, both military and civilian.

The trailers are air-conditioned to

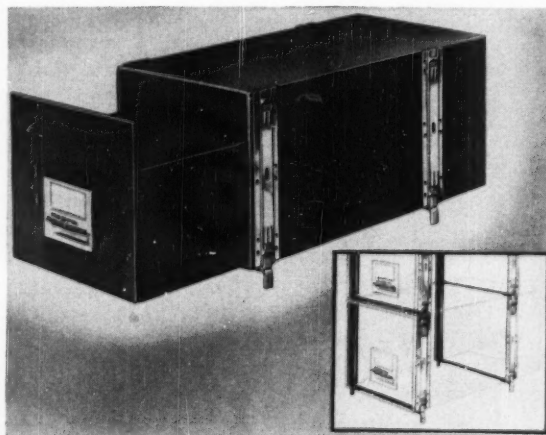
maintain even operating conditions under extremes of outside temperature ranging from 40 degrees below to 120 degrees above zero.

Among the possible uses of this mobile unit are: advance hospital or operating room, classroom, instrument maintenance shop, etc.

After the hinged floor sections are raised and hooked in vertical position, one man can crank the extension sides in or out in approximately three minutes.

Inter-locking building block technique, so familiar to youngsters, has been applied to the files of inactive business records kept in fibre board drawers.

Two channel steel side plates are factory applied to the sides of the



Staxsteel cabinets are called "self-stacking" transfer files. Phantom view shows how units stack. Steel side plates plus steel stackers bear weight at four points.

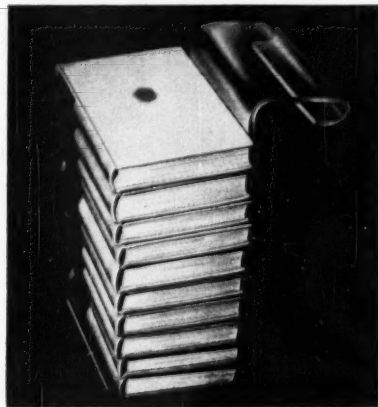
drawer. The basic principle is to relieve the drawers of weight and prevent bulging of the drawers.

At the bottom of each side plate there is a lug, which fits into the side plate of the drawer beneath when putting the drawers on top of each other. The lugs on the bottom drawers serve as legs, keeping the files off the floor.

"Staxonsteel" is the trade name of this development of Bankers Box Company, Chicago, Ill.

The units are shipped flat.

A book-end to end book-ends is a new development of Mundro Products Corporation, Detroit, Mich. It is made of plastic, and actually is a declining shelf. When one book is removed,



Books in the office, home, laboratory, drafting room can now satisfy any hidden skyscraper complex. Capacity of holder is twelve or more books.

those remaining automatically slide into place.

"No longer is it necessary to push book-ends together—no longer is it necessary to scratch or mar desk and table tops because of the constant shuffling of conventional book-ends," is a statement of the manufacturer.

A general purpose plastic sealing compound for sealing refrigerator cabinets, automobile bodies, prefabricated buildings, and railroad cars has been announced by Dennis Chemical Company, St. Louis, Mo.

It is described as non-drying, non-hardening, and non-staining, and non-contaminating. It is available in bulk and extruded forms.

Dennis Chemical has also announced a new adhesive, an open-tack and pressure-sensitive latex product. Major



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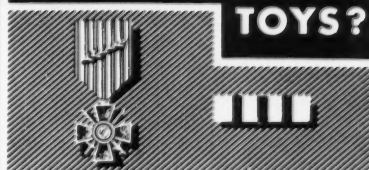
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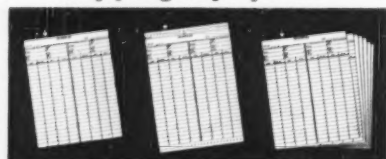


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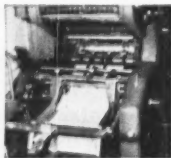
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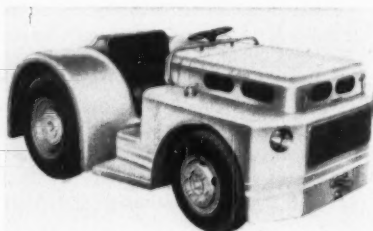
use is for self-sealing purposes on paper bags, envelopes, boxes, and cartons.

The adhesive is applied to two surfaces. The manufacturer says that it dries rapidly by air, and that an immediate bond is formed by pressure of one coated surface to the other.

Low silhouette is one of the many features stressed for a new towing tractor made by Clark Equipment Company, Battle Creek, Mich.

Designed to meet the requirements of aircraft manufacturers, commercial airlines, and heavy industry, the new tractor has a fluid coupling and a special axle design.

It is twelve inches lower in over-all



This new tractor has a six-cylinder gasoline engine developing 114 brake horsepower at 3200 rpm; provides 215 foot pounds maximum torque.

height than comparable tractors. In addition, the operator is seated sixteen inches lower, giving greater visibility when handling large aircraft. It can be driven beneath the fuselage of many commercial planes, and can be operated under the wings of any plane large enough to require its drawbar ability.

A fluid coupling is said to combine smooth operation with full engine torque at low starting speeds. This acts as a safeguard for aircraft landing gear and other objects which require a slow, steady initial pull.

A self-contained battery-hydraulic machine for material handling capable of lifting 500 and 1,000 pound loads at eleven feet a minute has been developed.

Called the Hydra-Powrlift, the new machine is designed for handling crates, boxes, barrels, drums, pallets and other material of an awkward shape. It is 81 inches high and 32 inches wide over-all, and can be operated by one man, according to the maker, the Langley Manufacturing Company, Cambridge, Mass.

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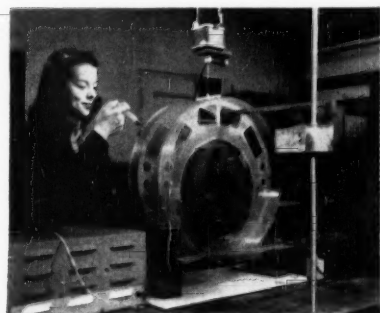
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Panelcreeet method of pre-cast, tilt-up concrete construction is now available throughout the country by license, according to an announcement by National Panelcreeet, Inc., Los Angeles, Cal.

Four models appear in the two illustrations below. Two of them are plastic.

The technique of using plastic models to test the effects of vibration on any large, complex machine has been developed by research engineers of the Westinghouse Electric Corporation.



Plastic "shot" cements model parts.

This young lady demonstrates a new use for the standard medical hypodermic syringe, cementing together parts of a plastic model used for vibration investigations. The "shot" of acetone and plastic cement is injected into holes drilled through parts to be joined. This method is said to insure a better job of fixing sections of the model which must withstand vibrations from the electro-magnetic "driver" shown at the top of the plastic frame.



Plastic models aid big machine research.

This young lady records the vibrations of a generator frame model with the help of a crystal phonograph. In testing, a wide range of vibration fre-



SMEAD'S TWO-PLI-TOP FOLDER SAVES MONEY — SAVES SPACE

The top edge and tab of Smead's TWO-PLI-TOP folders are reinforced by turning over and gluing an extra inch of stock—this gives a smooth, rolled non-cutting edge of double strength at the points of greatest wear. These folders not only will wear longer but will not cut or scratch fingers of the file clerk. Made of rigid, close knit manila fiber.

A medium weight TWO-PLI-TOP folder of 9½-point thickness provides approx. 23 points of thickness at the tab—more than twice that of a standard single top heavy weight 11 point folder.

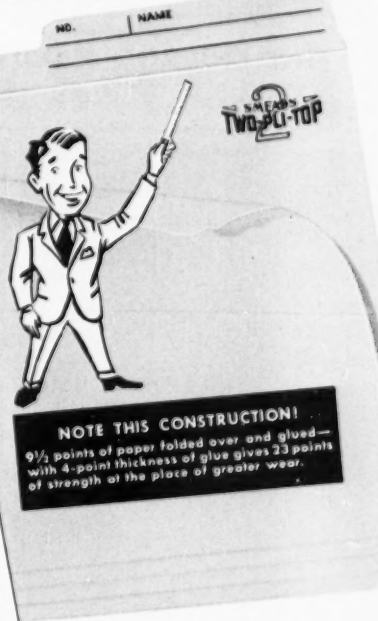
SAVE ON FOLDERS

Smead's TWO-PLI-TOP folders, medium-heavy weight 9½-point 2 5 cut tabs (illustrated) cost \$35.44 for 1250 folders—enough to fill five standard filing drawers. Standard single top heavy weight 11-point folders 2 5 cut tabs cost \$36.56 for 1250 folders—A SAVING OF \$1.12 FOR EACH FILE OF FIVE DRAWERS. CURRENT PRICES 9-18-52

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1250 11-point standard single top folders will take up 27½ inches of filing space. 1250 9½-point TWO-PLI-TOP folders will take up only 23¼ inches of space—a space saving of 3¾ inches. Assuming a five-drawer file to cost \$116.00 and to provide 130 inches of filing space, each inch is worth 89 cents—and the TWO-PLI-TOP FOLDERS thus SAVE SPACE WORTH \$3.34.

SPACE WORTH \$3.34



you get at the same time, folders which have GREATER strength (at the points of greatest wear) than the standard single top heavy weight 11-point folders. Zone 1 prices used in illustration.

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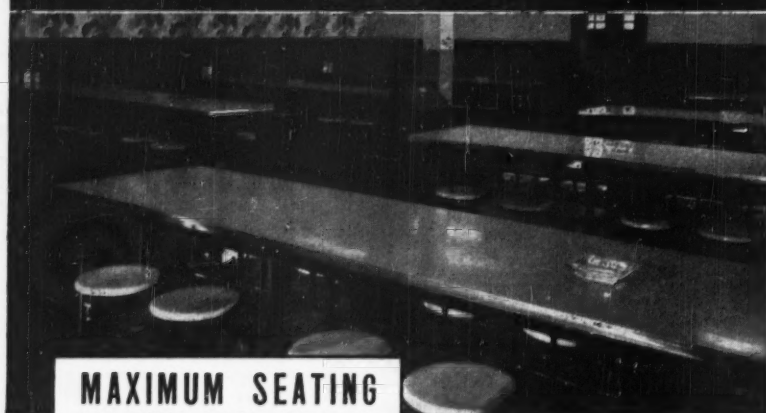
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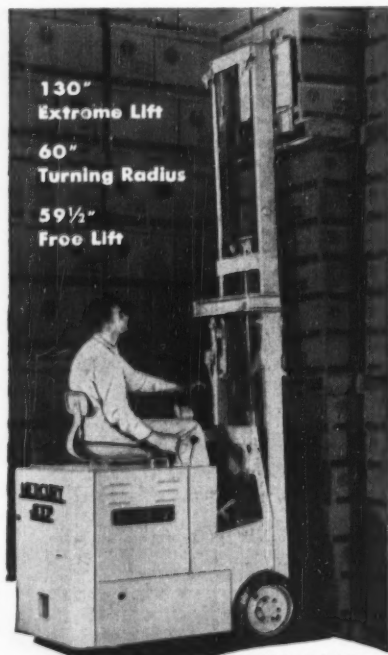
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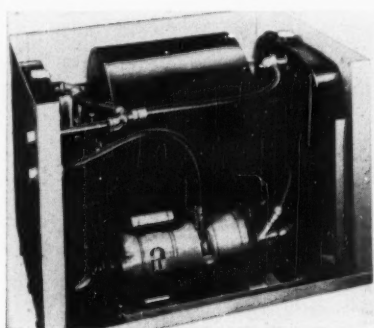
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quencies are applied by the electromagnetic driver.

This method can be used to investigate vibratory effects on machinery where it is impossible to get such data by mathematical computation. Similar in shape to the actual machines, the models are inexpensive and save costly design changes later, according to Westinghouse.

Increased air-conditioning efficiency at lower operating costs are now possible for owners of residential and small-store units.

Elimination of water usage is a feature of the Water Saver, according to Chrysler Airtemp, which produces it. In conventional operation the air con-



Chrysler Airtemp water saver weighs 350 pounds and occupies 8.3 square feet of floor space. Cabinet is finished in gray baked enamel.

ditioner removes heat from air and transfers it to water which is run to a drain. With the Water Saver, the heat from the water is transferred to outside air. The warm water is forced through two automobile-type radiators. A blower draws outside air through the radiators. The water is cooled and then returned to the air conditioner in a continuous cycle.

The manufacturer states that this new unit will enjoy a large market in sections where water supplies are scarce and where water rates are high.

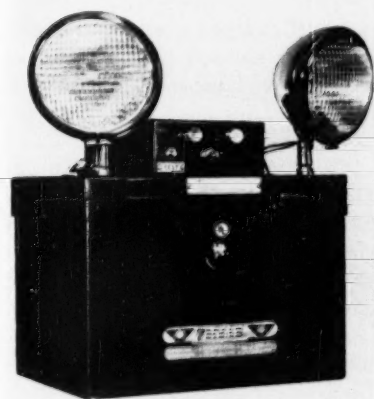
Floor maintenance is the subject of a 44-page illustrated booklet just turned out by the Multi-Clean Products, Inc., St. Paul, Minn.

The booklet describes various types of floors, and gives procedures for cleaning and maintaining asphalt tile, concrete, terrazzo and magnesite, rubber tile, wood flooring, and linoleum. It also explains how to shampoo rugs,

carpets, and upholstered chairs, and gives details of operating and keeping shipshape floor and vacuum machines and attachments.

Extra margin of safety are words used in connection with a re-designed automatic emergency lighting unit for use when central station power fails. It is said to provide sufficient illumination for ten hours.

The set is portable and is powered by a storage battery. A trickle charger



In case of a power failure this new automatic emergency lighting unit provides light so that important activities do not come to a quick stop.

automatically maintains the charge of the battery, and a built-in hydrometer indicates the state of the battery.

Producer of the emergency lighting unit—General Scientific Equipment Co., Philadelphia, Pa.—states that “without touching a switch, light instantly illuminates the room if regular power fails.”

It was designed primarily for industrial plants, laboratories, hospitals, hotels, and theatres.

Snoring husbands are problem children to many a long-suffering wife.

This gets back to a survey recently made in Chicago as to why people wanted to own a tape recorder. Some 1,982 interviews made in neighborhood shopping areas showed that family entertainment was the chief reason why people wanted a recorder. However, one brave and uninhibited woman stoutly declared that she wanted to prove beyond doubt that her husband snored.

The Ampro Corporation, Chicago, made the survey, and 62 per cent of



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those interviewed declared for a tape recorder for the pleasure it would afford themselves and their families.

Business uses given for the machines included dictation and preparation of field reports. One salesman pointed out that he could dictate letters while on a trip and mail the recording to the home office for immediate action.

Another interesting revelation was that most people like to hear the sound of their own voices. A minister said he would appreciate hearing how he sounded to his congregation on Sunday

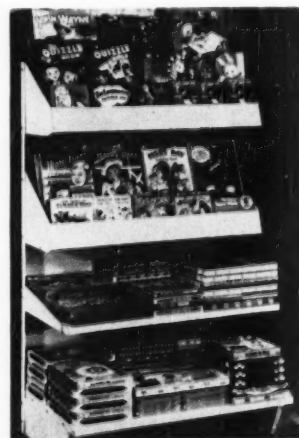
A fuel addition agent developed to prevent screen and filter clogging of industrial and household oil burners has been announced by Monsanto Chemical Company, St. Louis, Mo.

The new product, named Santolene H, is said to prevent clogging by inhibiting the formation of fuel oil sludge and sediment, by preventing deposition of sludge and sediment already present, and by reducing rusting.

According to the manufacturer, Santolene H is effective with most base fuels at the rate of three gallons to 42,000 gallons of oil, or a concentration of less than 0.01 per cent.

The kiddie corner has moved into the super-market, with the introduction of a four-shelf book and game rack made by S. A. Hirsh Manufacturing Company, Skokie, Ill., for the Mershaw Publishing Company, New York, N. Y.

The Mershaw company is using the racks in a new merchandising operation designed to provide super-markets



New merchandising racks for things of interest to children are five feet high, two feet deep, and are produced in three and four feet widths.

with a children's department containing a variety of books, educational games, puzzles, cut-outs, and similar items of special interest to small-fry.

Installations have already been made in 1,500 super-markets, including Food Fair, A & P, Safeway, Grand Union, IGA, and Red & White Stores.

(Editorial Note: The question is whether precocious junior will prefer to go intellectual, or continue to ride on the kid's seat of the "baby carriage" which his mother pushes from the roast beef to the canned peach departments.)

A new mobile camera which makes a record of up to 720 documents or cards an hour has been developed by



The operator is photocopying the page of a book, one of the many kinds of documents and records which can be photographed by new machine.

Peerless Photo Products, Inc., Shoreham, Long Island, N. Y.

Labelled the "Tupper-Peerless copy camera," it photographs one side of letters and documents and both sides of file cards. Cycle of operation is five seconds. It is mounted on a rubber tired truck with handles and 50 feet of cable, so that it can be moved to the files where material to be copied is kept.

The camera is day-light loading. The exposed paper is enclosed in a light-tight receiver and can be moved in day-light to the dark-room.

Change in velocity of sound waves is now used as a measure of fluid flow. A new type electronic flow meter capable of measuring the air currents in a still room or the rapid flow of fluid in pipes has recently been developed at the National Bureau of Standards, Washington, D. C.

This device, designed by Henry P.

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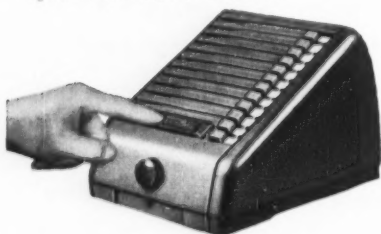
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Firm _____
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Kalmus of the NBS staff, has a fast response and does not obstruct the fluid currents in making the measurement. The signal-to-noise ratio is sufficiently high to permit the measurement of extremely small velocities.

In the new flow meter a sound wave is transmitted over a fixed distance through the flowing fluid, and the phase of the received wave is compared with that of the transmitted wave. The sound energy is imparted to and taken from the fluid through the walls of the containing vessel. No part of the measuring system need come in direct contact with the medium under study.

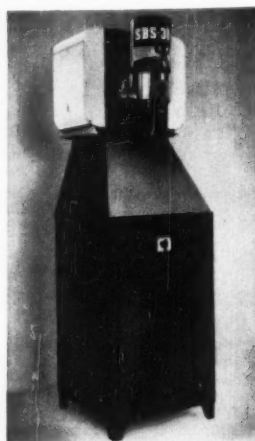
This latter characteristic of the system makes the unit applicable to the measurement of blood flow in the aorta or for the detection of the flow of chemicals in a closed system, such as the coolant in a chain reactor.

Minor modifications will permit the measurement of the flow of such fluid as gas or oil in a metal pipe, or a determination of the relative velocity of a ship to that of the water through which it is moving.

A waterless wash-stand which needs no plumbing connections is the proud boast of the Sugar Beet Products Company, Saginaw, Mich.

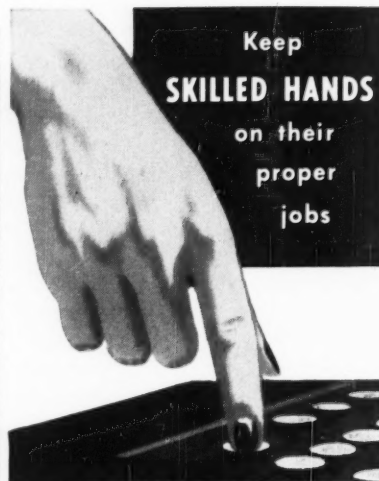
The intriguing phrase, "bringing the washroom to the worker," is used to describe this portable appliance which supplies a skin cleanser, paper towels, and a receptacle to receive the waste towels.

The dispenser wash-station can be set up along production lines, near operations where grease, varnishes, and



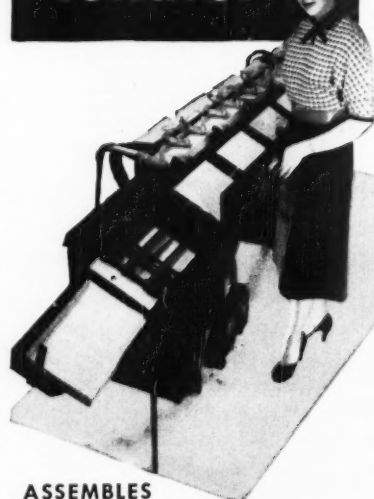
The "waterless washstation" is finished in green enamel, and the cleanser dispenser in aluminum.

Keep
SKILLED HANDS
on their
proper
jobs



Now you can assemble
24,000 sheets per hour
AUTOMATICALLY

with the **macey**
collator



ASSEMBLES

bulletins • internal procedures
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Why use skilled office help to hand-gather sets of papers for manuals, direct mail and so on? It's slow and costly. Now, with the Macey Collator, one semiskilled operator can set up a job in 15 minutes, then gather 24,000 sheets per hour. You can see how the Macey Collator pays for itself very quickly.

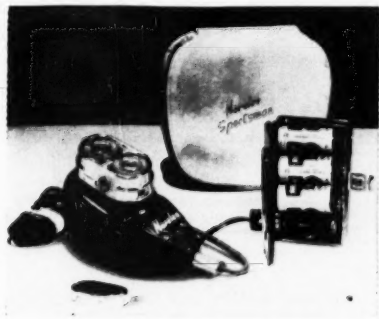
Write for further information. Demonstrations may be arranged.

HARRIS-SEYBOLD CO.
Special Products Division

Dept. A, Cleveland 5, Ohio
FINE GRAPHIC ARTS EQUIPMENT... FOR EVERYBODY'S PROFIT

other hard-to-remove materials are encountered in warehouses and other places without adequate washing facilities. Other uses are in outdoor areas where soap and water are not available.

Fastidious fishermen now can have a portable electric shaver which operates on ordinary flashlight batteries.

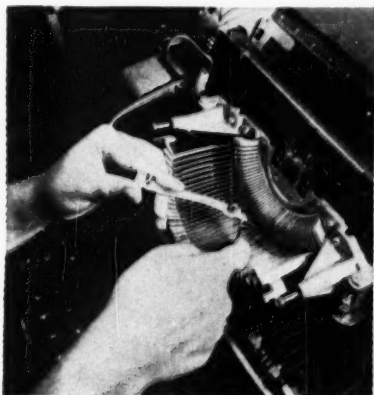


Designed to sell as a sportman's gift item as well as to men whose occupations keep them outdoors, the new razor comes in a pigskin travel case with a steel battery container.

It is known as the Norelco Sportsman, and is being introduced by North American Philips Company, Inc., of New York, N. Y.

Changeable type bars now bring additional flexibility to the electric typewriter.

This is a new device designed to



The typist is shown changing a type bar.

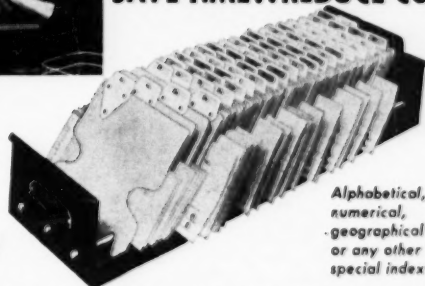
speed the typing of specialized information and was developed by representatives of the Atomic Energy Commission and International Business Machines Corporation.

Originally requested for publication work by the Technical Information



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with less handling!**



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geographical
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Most complete sorting line available. Easy rolling stands also available.



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(confidential, obsolete
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without noise, dust or litter.**

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Desk Model (shown above)

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- 9-inch cutting width
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Table Model (all-purpose machine)

- 14-inch cutting width
- 1/2-inch shreds, or multiples thereof

Heavy Duty Floor Model (production machine)

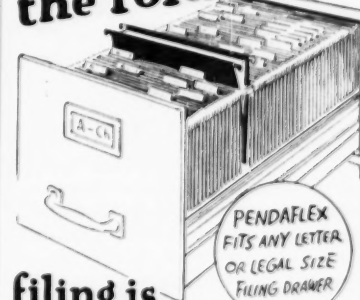
- 21-inch cutting width
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For Complete Information Ask for Circular #3

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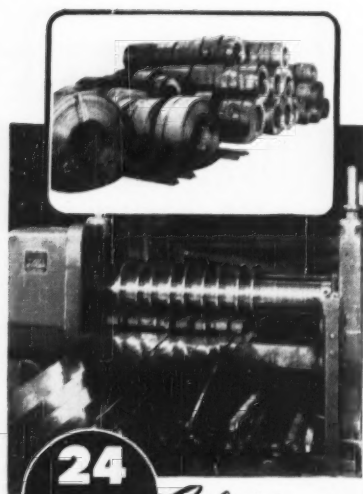
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ADDRESS _____

CITY & STATE _____



**24
HOUR**

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Service!*

If you operate a slitter of your own, you may always enjoy this kind of service. Think what a blessing it is to be able to meet expected and unexpected needs for slit strands on such short notice—how greatly it simplifies production planning—how it eliminates production bottlenecks and minimizes strip inventories.

Then, too, when you buy strip in standard widths, your strip supply sources are more numerous. You can buy wherever you get the best delivery, price, and quality.

Slitting service now may cost you anywhere from \$10.00 to \$100.00 or more per ton. Even if your needs were only 50 tons per month, at an average of \$20.00 per ton for slitting, the cost per year would be \$12,000—an amount which alone may be more than sufficient to make a Yoder slitter highly profitable.

The Yoder Slitter Book (sent on request) analyzes and discusses the economics as well as the mechanics of slitter operation. Yoder engineers will be glad to study your needs and submit recommendations as to kind, size, and cost of suitable slitting equipment.

THE YODER COMPANY

5531 Walworth Avenue • Cleveland 2, Ohio

**Rotary
Gang
SLITTERS**



Service at Oak Ridge, the type bars can be disengaged from the type bar fulcrum wire by an unhooking motion. Once free, the type bar is slipped off the connecting link. Converse action installs the new type bar.

Available are chemical, mathematical, and other scientific type characters, as well as foreign language letters. Special characters such as subscripts and exponents are included. Engineering, drug, chemical, and technical book publishing fields are said to be a prospective market, as the changeable type bars will make it possible to type for reproduction more technical data than previously possible.

IBM also stated that the changeable type bars make it possible to prepare, under internal control, books containing formulas which are secret.

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to
Tackle
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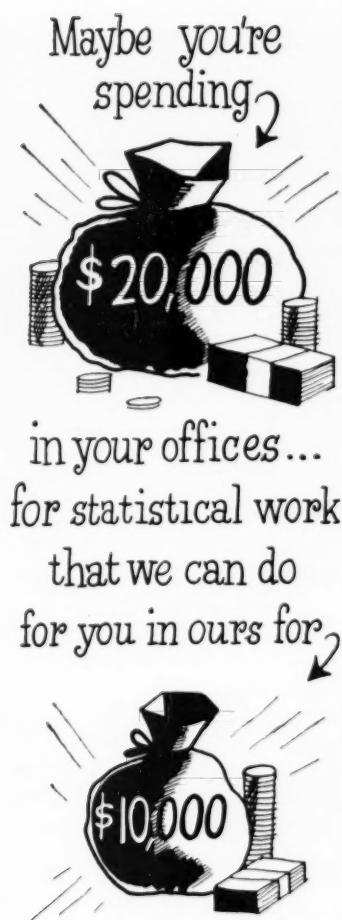
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QUIZ ANSWERS (Quiz on page 86)

1. *b.—Enrico Fermi.* Nobel prize winner and professor of physics at the University of Chicago. It was on the University's squash court that the first atomic fire was lighted.

2. *b.—isotopes.* These are radioactive atoms of ordinary elements like carbon, or iron; they give off radiation and a tiny electric charge. Last year the Atomic Energy Commission sold over \$1 million worth of isotopes for medical and industrial research.

3. *a.—\$5 million.* That the cost of a stationary atomic power plant might be this low was hinted by Gordon Dean, Chairman of the Atomic Energy Commission, in a public statement at the close of 1952.

4. *c.—twice as high.* It was estimated that electricity generated by atomic power might cost about 7 mills per kilowatt-hour; this compares with 3 mills for waterpower.

5. *c.—20,000 fold.* Not only can new varieties of plants be created, but existing types can be made more resistant to disease and insects.



6. *c.—hydrogen,* the lightest of the elements.

7. *a.—the nuclei of atoms.* The neutron, one of the fundamental building blocks of the atom, carries no electrical charge, can only be released with a vast expenditure of energy. Once the U-235 atom is split, however, it releases two or three neutrons which in turn could split two or three atoms, and in turn four or five other atoms, and so on, in geometric progression. Once an atom is split, a self-perpetuating chain reaction is started to keep the fire burning automatically.

8. *a.—the nuclei of atoms.*

9. *a.—Brookhaven National Laboratories,* located at Upton, Long Island.

10. *d.—\$9 billion.*

ITEM 23—CONTRIBUTIONS
PAGE 1—FORM 1120
SECTION 23q—IRC

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Year's report of a Company Built on Friendship

AT this time of year The Home Insurance Company reports on its activities of the previous year. The figures, the numbers, the dollars and cents have been summed up. They show the financial position of the Company and they have much interest for investors and stockholders. That is proper.

But insurance is a great deal more important than just dollars and cents. Insurance deals with *people*. You can't show on a balance sheet what it means to a man when fire or other catastrophe wipes out his life's work. You can't put a price on protection that enables you to work and plan for the future with assurance that it won't all be undone at a single stroke. In human values, the services of insur-

ance are almost beyond the ordinary yardsticks of price and value received.

More than almost any other type of business, insurance is based on the true principles of friendship. The first attribute of a friend is that he will come to your aid when you need it most—and that is exactly what insurance is designed to do. Secondly, a friend is somebody you know, somebody who is interested in *you*. In practically every city, town and village across the nation there is a representative of The Home. He is The Home. Through him, the Company extends its protection to you. Through him, when loss occurs, that guarantee is made good. Through him, The Home is *your* friend.

On the eve of celebrating our 100th birthday, we look back on 1952 as an eventful and resultful year for The Home Insurance Company. It is a great satisfaction to all in The Home family — employee and management, producer and stockholder — to know that their year's work can be counted in terms of good things for many people . . . suffering averted, troubles overcome, peace of mind for people everywhere.

James O. Smith
PRESIDENT



BALANCE SHEET

ADMITTED ASSETS	December 31, 1952
United States Government Bonds	\$ 93,293,526.82
Other Bonds	69,662,362.94
Preferred and Common Stocks	154,190,561.00
Cash in Office, Banks and Trust Companies	34,904,305.02
Investment in The Home Indemnity Company	15,049,406.50
Real Estate	6,860,066.57
Agents' Balances or Uncollected Premiums, less than 90 days due	18,508,593.77
Other Admitted Assets	4,464,325.63
Total Admitted Assets	\$396,933,148.25
LIABILITIES	
Reserve for Unearned Premiums	\$171,326,998.31
Unpaid Losses and Loss Expenses	34,346,108.04
Taxes Payable	7,700,000.00
Reserves for Reinsurance	1,510,607.16
Dividends Declared	3,600,000.00
Other Liabilities	4,372,168.98
Total Liabilities	\$222,855,882.49
Capital Stock	\$ 20,000,000.00
Surplus	154,077,265.76
Surplus as Regards Policyholders	\$174,077,265.76
Total	\$396,933,148.25

NOTES: Bonds carried at \$5,766,396 Amortized Value and Cash \$83,890 in the above balance sheet are deposited as required by law. All securities have been valued in accordance with the requirements of the National Association of Insurance Commissioners. Based on December 31, 1952 market quotations for all bonds and stocks owned, the Total Admitted Assets would be \$393,830,412 and the Surplus as Regards Policyholders would be \$170,974,530.

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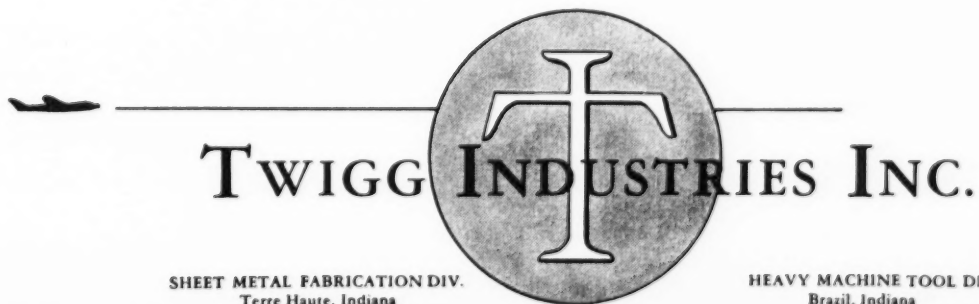


A NEW STANDARD FOR
SKILL AND PRECISION IN THE MANUFACTURE OF

Engine components FOR JET AIRCRAFT

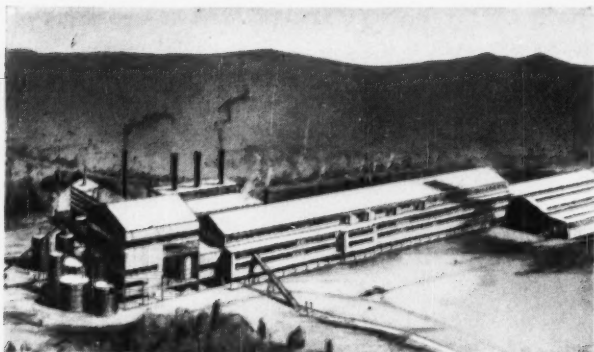
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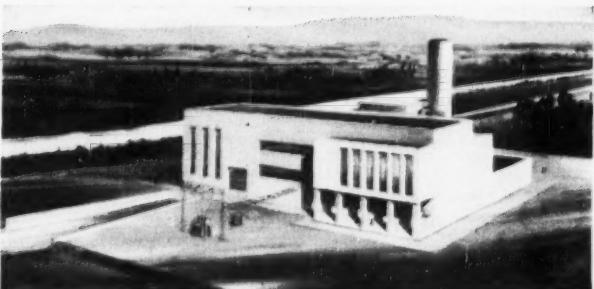


SHEET METAL FABRICATION DIV.
Terre Haute, Indiana

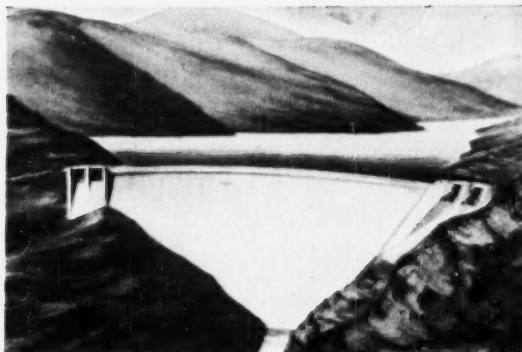
HEAVY MACHINE TOOL DIV.
Brazil, Indiana



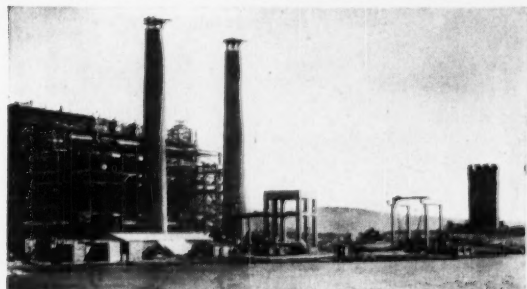
IT TAKES MANY SKILLS to build a newsprint mill, even more to build the first one in India! That's what EBASCO is doing at Neapanagar, India. Purchase of equipment and supervision of installation and operation are part of EBASCO's responsibility.



ON THE PO RIVER, near Torino, Italy, the Moncalieri Steam Electric Station will be constructed. EBASCO engineers are handling the design of this 37,500 KW plant and, in addition, purchasing and expediting materials and equipment for the Azienda Elettrica Municipale di Torino.



IN JAPAN, as a member firm of Overseas Consultants, Inc., EBASCO is supervising design and construction of this dam. To be part of the Kamishiiba Hydro-Electric Development of the Kyushu Electric Power Co., it will be the first arch dam constructed in Japan.

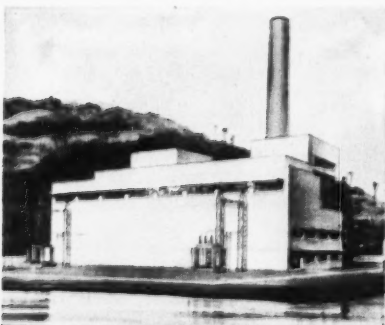


MODERN GREECE meets ancient Greece where the Aliveri Steam Electric Station is being built, as part of a new power system. At the right of the photo, stands a centuries-old signal tower. When completed the new system will include 3 hydro plants.

HOW ONE U. S. FIRM IS HELPING TO BUILD A BETTER WORLD

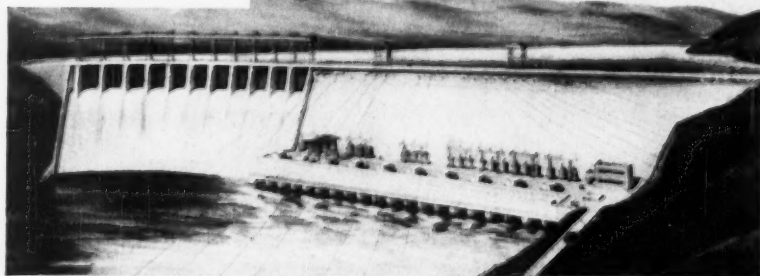
For nearly fifty years EBASCO has been one of the world's leading firms of engineers, constructors, and business consultants. The design and construction services of EBASCO are utilized by large and small companies in practically every field of business and industry in the United States. Today, in addition to its clients in this country, EBASCO is serving many clients in foreign countries—helping them rebuild war-torn nations, speed industrial progress, and introduce modern technological improvements.

Pictured on these pages are six typical EBASCO projects overseas, illustrating the many different types of installations EBASCO handles from start to finish. Because EBASCO integrates many skilled men and many specialized services into one smooth-working organization, it is equipped to do an entire job, or any phase of it, any place in the world.



INDIA'S Bombay Harbor is the location of the Trombay Thermal Electric Station, a 125,000 KW plant. EBASCO is handling the engineering and construction, the training of Indian personnel and starting up of this modern station which embodies semi-outdoor design for the Tata Power Co., Ltd.

IN BRAZIL, the Piexoto Hydro-Electric Development will have an ultimate capacity of 400,000 KW. Cia Paulista de Forca e Luz, a subsidiary of American & Foreign Power Co. serving most of the interior of the State of Sao Paulo, engaged EBASCO for the job.



If you need a new plant . . . or want to improve your present facilities . . . EBASCO can help you. We have a booklet called "The Inside Story of Outside Help" that describes our services in detail. May we send you a copy? Address: EBASCO Services Incorporated, Dept. N, Two Rector St., New York 6, N. Y.

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